

HOLIDAY HOMEWORK
SUMMER VACATION (09.05.2026 to 16.06.2026)
CLASS – VI

हिंदी कक्षा 6

- 1 सुंदर लिखाई में 20 पेज सुलेख लिखो।
- 2 भारत के मानचित्र में राज्य और राजधानियां भरकर चिपकाओ।
- 3 गेंद से खेले जाने वाले खेलों के खिलाड़ियों के नाम लिखो।
- 4 निम्न निबंधों को 100 शब्दों में लिखें।
मेरा प्रिय खेल
मेरा मित्र
मेरे सपनों का भारत।
- 5 किन्हीं 20 शब्दों के पर्यायवाची शब्द लिखें।
- 6 2 दिन की छुट्टी एवं फीस माफी हेतु प्रार्थना पत्र लिखें।
- 7 प्रतिदिन एक पेज अखबार या पुस्तक से माता-पिता के सामने पढ़ें।

Maths

- 1 दो बार वर्णमाला लिखें।
- 2 किन्ही 10 वर्णों पर बारहखड़ी लगाओ।
- 3 किन्ही 20 शब्दों का वर्ण विच्छेद करके लिखें।
- 4 किन्ही 10 पुल्लिंग 10 नपुंसकलिंग और 10 स्त्रीलिंग शब्दों के एकवचन द्विवचन एवं बहुवचन लिखें।
- 5 रंगों के नाम और शरीर के अंगों के नाम लिखते हुए एक चार्ट बनाएं।
- 6 वंदे मातरम गीत संस्कृत में लिखकर हिंदी अर्थ भी लिखे तथा याद करें।
- 7 अपनी पाठ्य पुस्तक तथा किसी अन्य संस्कृत पुस्तक से कोई 20 श्लोक लिखकर हिंदी में अर्थ लिखें।

SOCIAL SCIENCE

1. Map work

(i) Label and locate states and union territories on India Map and paste in your notebook.

(ii) Label and locate Continents and Oceans on World Map and paste in your notebook.

2. What is a Map? What are the different types of Maps? Explain.

3. Write about a tourist place of India which you like the most.

4. What are the three components of Maps? Explain with examples.

5. What are the Latitudes and Longitudes. Explain with diagram.

6. Write about them-

(i) Geologists (ii) Palaeontologists (iii) Anthropologists (iv) Archaeologists.

7. Delhi's and Bengaluru's latitudes are 29°N and 13°N ; their longitudes are almost the same, 77°E . How much will be the difference in local time between the two cities? the name of India's neighboring nations.

8. Write the names of all the states and union territories of India and their capitals.

9. Write about the fundamental rights and duties of Indian citizens given by the Indian Constitution.

10. Write about on a local historical place nearby you.

11. What are the sources of History? Make a diagram of Sources of History. (Textbook Page no. 67)

12. Complete your Social Science MDP work. (Healthy Food and Nutrition)

Library

Class 6_7 Holiday Homework .pdf - Read-only



Read Only - Save a copy to edit.

**Holiday Homework – Class 6/7**

General Instructions

Use a separate Library notebook for all work

Cover it with pink chart paper

Maintain neat handwriting and proper margins

Section 1: Reading & Writing Skills

★ 1. Story Writing in English & Hindi both

Write a short story (15–20 lines) on any one topic:

A Magical Adventure

The Day I Became Invisible

A Visit to a Strange Planet

★ Add a title and moral to your story

Write all these questions with description.

Q- Write the difference b/w Newspaper/ Magazine/ Periodicals and book . Explain with examples.

Q- Write the difference between Classics/Folk Tales, Comics and mythological Tales with examples.

Q- Write the difference between Author/Writer and Editor . Explain with examples.

Q- Explain the difference between digital library, E- library and E- content.

Q- list all the children magazines & newspaper available in your school library.

Creative activity**Activity 1: Kindness Rock**

Take a round-shaped stone.

Paint it with a light acrylic base colour (peach / orange / baby pink).

Once dry, write a kindness quote/thought using a dark permanent marker.

OR

Paste a small printed quote on it.

Your Kindness Rock is now ready for submission.

Activity 2: Ice Cream Stick Puzzle

Take some ice cream sticks.

Colour one side of the sticks neatly.

On the other side, paste a cut-out picture (from magazines, old notebooks, or scrap).

Write a short story (6–8 lines) on the coloured side of the sticks.

Arrange the sticks properly and secure them using transparent cello tape to form a puzzle.

Note:

Videos for both activities will be shared for your guidance.

Marks/grades will be awarded based on your creativity, effort, and presentation.

Holiday homework class 6.pdf - Read-only



Read Only - Save a copy to edit.



Class: VI

Subject: English

PM Shri Kendriya Vidyalaya Karnal

 Holiday Homework
for summer vacation
(2026-27)

Instructions: 1. Do holiday homework in separate notebook

2. Writing must be neat and clean.

Reading Skills

1. Read 2-3 pages daily from a story book and novel.

Focus on:

- ❖ Pronunciation
- ❖ Fluency
- ❖ Understanding

2. Poorvi (NCERT):
Unit -1 (Learning Together)

Chapter: A Bottle Of Dew

Poem- The Raven And The Fox

- ❖ Read above chapters carefully
- ❖ Learn Q/A and vocabulary
- ❖ Revise back exercise.

Writing Skills

1. Write an application to the principal of your school for two days leave.
2. You are Jagrit/ Jasmin of class 6. You have lost a smart watch in school. Draft a notice in 30-40 words for your school notice board.
3. Write 10 lines based on following picture:

Speaking skills

Prepare a speech on any following topic:

1. Importance of Education
2. Management of Time

Grammar

1. What is naming word? Paste any 5 pictures.
2. Verb : Write 30 forms of verbs
3. What is preposition? Paste or draw any 5 pictures and write sentences and underline preposition.
4. Write 20 opposite words.
5. Write 20 numbers (eg. Boy- boys, tooth-teeth etc.)
6. Write 20 genders (eg. Boy- Girl, man- woman etc)

Science



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**PMSHRI KV KARNAL** **CLASS 6 – SCIENCE (CURIOSITY)** **SUMMER HOLIDAY HOMEWORK (May–June 2026)**

Explore • Experiment • Observe • Learn • Create

 MAIN PROJECT & NOTEBOOK WORK **MAIN PROJECT (To be done in Scrapbook)****1. Make a Herbarium File**

- Collect and paste 20 different leaves
- Write for each:
- Name of plant
- Leaf venation (Reticulate/Parallel)
- Type of root (Tap/Fibrous)
- Draw and label neatly

2. Make a Magnet Toy

- Create a simple working toy using magnets
- Examples: Magnetic crane / fishing game
- Write:
- Materials used
- Working principle

 Be a Young Scientist! Be Creative!**3. Diversity in the Living World (NEW)**

- Collect pictures/draw plants & animals
- Classify into:
- Living / Non-living
- Plants / Animals
- Write 5 characteristics of living things
- Add examples from your surroundings

 NOTEBOOK ASSIGNMENTS**4. 30-Day Food Diary (Mindful Eating)**

- Record daily food for 25–30 days



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sci.pdf



6. 🍌 Balanced Diet Pie Chart

- Draw and label:
- Carbohydrates
- Proteins
- Fats
- Vitamins & Minerals
- Write importance

7. 🧠 Know Your Scientists

Write short notes on:

- Janaki Ammal (Botany)
- Salim Ali (Birdman of India)

8. 🖋️ Think & Write (Reasoning)

- Why do plants need sunlight?
- Why do objects fall down?
- Why is biodiversity important?

9. 🧪 Experiments (Perform & Record)

- (a) Dissolve salt, sugar & oil in water
(b) Floating & sinking objects

👉 Write:

- Observation
- Conclusion

🌍 SCIENCE IN DAILY LIFE

10. 🏠 Uses of Science



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← sci.pdf



(Simple and clear)

📌 Problem Identified

(What problem you observed in daily life?)

📌 Your Idea / Solution

(Explain your innovation)

📌 Materials Required

(List items needed)

📌 Working Model / Explanation

(How it works?)

📌 Benefits

(How it helps people/environment)

🌟 EXAMPLE IDEA

Title:

Smart Water Saver Tap

Problem:

Water wastage while washing hands

Idea:

A tap that automatically stops water using a simple spring system

Materials:

Plastic bottle, pipe, spring, tape

Working:

Press tap → water flows

Release → stops automatically

Holiday Homework English

- i. 2 comp. Passages(1 Descriptive and 1 case based)
- ii. 2 Notices
- iii. MCQ Based Questions- (CBQ)
 - The Last Lesson
 - The Third Level
 - The Tiger King
 - My Mother at Sixty-Six
- iv. Complete the chapter 'The Tiger King' in your Notebooks.
- v. Prepare a file on any topic at least 15 pages and Handwritten with office file cover.
- vi. Revise whole syllabus.
- vii. Class Magazine/Comic strip/Mask preparations/Animation Mind-Maps/Painting of a character/Puzzles.

Let's
Learn,
Create &
Explore!

PM SHRI KENDRIYA VIDYALAYA KARNAL

SUMMER VACATION HOMEWORK (2026-27)

CLASS: IX

SUBJECT: SOCIAL SCIENCE



1

PROJECT GUIDELINES

Every student has to compulsorily undertake Project on the topic:

DISASTER MANAGEMENT



I will make an amazing project!

CONTENTS

- Introduction
- Types of Disasters
- Causes
- Effects
- Measures
- Conclusion



GRAPHS



DATA

The project must include: cover page, certificate, index, supporting, images, graph, data etc should be included.

(Note: use 12-20 A4 Size sheet/paper.)

2

ART INTEGRATED PROJECT

Prepare an Art Integrated Project on the topic "Freedom fighters of **TELANGANA**".

(Note: use 10 -15 A4 Size paper.)



I will show their bravery through my art!

FREEDOM FIGHTERS OF TELANGANA



Let's salute the heroes of our land!

3

MAP WORK : LOCATE AND LABEL

1. all capitals of all Indian states and Union Territories on the political map of india. Use one map for Five states only. (Total seven maps)
2. All first world war and second world war countries on the political map of world.

INDIA - STATES & UT CAPITALS



WORLD - WWI & WWII COUNTRIES



First World War Countries Second World War Countries

I will locate and label all the countries!

4

Read chapter- 1 **UNDERSTANDING SOCIAL SCIENCE** carefully and write Textual questions of the chapter in your holidays Home work notebook as a holidays homework.



Reading today, learning forever!

CHAPTER - 1 UNDERSTANDING SOCIAL SCIENCE

TEXTUAL QUESTIONS

1. What is Social Science?
2. Why do we study Social Science?
3. What are the main branches of social science?
4. How does social science help us in daily life?

PLAN TODAY,
PERFORM TOMORROW,
SUCCEED ALWAYS! 😊

ग्रीष्मकालीन अवकाश के लिए गृह कार्य..



लेखन - कार्य

निम्न विषयों पर लगभग 150 शब्दों में अनुच्छेद लेखन लिखिए।

1. यदि मैं देश का राष्ट्रपति होता/होती
2. स्वाध्याय के लाभ
3. सोशल मीडिया के प्रयोग से मेरी पढ़ाई में होने वाली हानि
4. जंक फूड से पीड़ित आज के युवा
5. बच्चों के सबसे अच्छे मित्र - माता-पिता तथा गुरु



- औपचारिक पत्र लिखिए

1. गरीब तथा अनाथ बच्चों की उत्तम पढ़ाई की सुविधाओं की व्यवस्था का प्रबंध करने के लिए भारत के शिक्षामंत्री के नाम पत्र लिखो।



2. आपके शहर में लगातार डेंगू की बीमारी फैल रही है। जिसके कारण आम लोगों को गंभीर परेशानी हो रही है। इसलिए डेंगू के मच्छरों से रोकथाम के लिए आपके शहर के नगर निगम के स्वास्थ्य अधिकारी को पत्र लिखो।



- अनौपचारिक पत्र लिखिए

3. अपने बड़े भाई के कक्षा 12वीं के उत्तम परीक्षा परिणाम आने पर बड़े भाई को बधाई पत्र लिखो।



4. आपकी बड़ी बहन विदेश में उच्च शिक्षा के लिए जा रही हैं। उसके उज्ज्वल भविष्य की कामना हेतु बड़ी बहन का होंसला बढाने के लिए अनौपचारिक पत्र लिखो।



... उपसर्ग के दस उदाहरण लिखने हैं।



1. प्रति
2. परा
3. सह
4. नि
5. सु
6. दु
7. आ
8. कु
9. अभि
10. उप

... प्रत्यय के दस उदाहरण लिखने हैं।

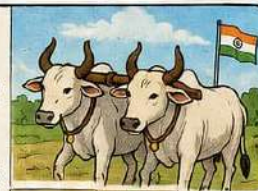


1. वाला
2. पन
3. इक
4. आक
5. ईय
6. ता
7. आना
8. कार
9. मय
10. इयत

परियोजना कार्य

परियोजना कार्य A4 साइज के पेपर पर पूर्ण करके एक पंजिका (फाइल) बनानी है।

- ... 'दो बैलों की कथा' आजादी की लड़ाई की ओर संकेत करती है। इस विषय पर अपने विचार व्यक्त करते हुए सचित्र वर्णन कीजिए।
- ... क्रांतिकारियों के नामों की सूची बनाइए और उनके कार्यों का सचित्र वर्णन कीजिए।



---- फाइल में अपना फोर्टफोलियो बनाओ।

याद करने का कार्य

पाठ्यपुस्तक गंगा से
पाठ-1 दो बैलों की कथा



समय का सदुपयोग करें,
मेहनत करें और
सफलता प्राप्त करें!





PM SHRI KENDRIYA VIDYALAYA KARNAL

ENGLISH

HOLIDAYS HOME WORK

CLASS 9

1

PARTS OF SPEECH

Prepare notes with examples on the following:

- Noun
- Pronoun
- Verb
- Adjective
- Adverb
- Preposition
- Conjunction
- Interjection



Include definitions + 5 examples each

2

DESCRIPTIVE PARAGRAPH WRITING

Write any two paragraphs on the following topics:

- My Best Friend
- A Memorable Day
- My Favourite Place
- Morning Scene in My Area



Each paragraph should include:
Introduction, Description,
Feelings, Conclusion

3

LETTER TO EDITOR

Write any two letters on:

- Pollution in your city
- Bad condition of roads
- Importance of cleanliness
- Water shortage problem



Follow proper format
(Address, Date, Subject, etc.)

4

EMAIL WRITING

Write any two emails on:

- Request for leave
- Complaint about online classes issue
- Invitation for school event
- Thank you email



Use proper email format
(To, Subject, Body, Closing)

5

TLM ACTIVITY

Prepare one TLM (Teaching Learning Material) on the chapter allotted to you.



You can make:

- Chart
- Model
- Flashcards
- Mind Map



BE CREATIVE, BE NEAT, AND DO YOUR BEST!



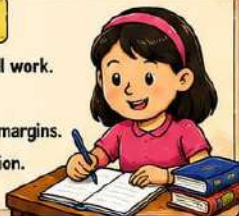


LIBRARY HOLIDAYS HOME WORK

CLASS 8/9

GENERAL INSTRUCTIONS

- Use a separate Library notebook for all work.
- Cover it with pink chart paper.
- Maintain neat handwriting and proper margins.
- Write all these questions with description.



Q1 Write the difference b/w Newspaper/ Magazine/ Periodicals and book . Explain with examples.



Q2 Write the difference between Classics/Folk Tales, Comics and mythological Tales with examples.



Q3 Write the difference between Author/Writer and Editor . Explain with examples.



Q4 Explain the difference between digital library, E- library and E- content.



Q5 List all the children magazines & newspaper available in your school library.



Q6 Prepare a list of 10 idioms/ Phrases in English & Hindi related to Reading/ Books/ Book worm.



WRITE ANY TWO :

Short Story
(150-200 words)



Poem
(any theme)



"A Day
Without Books"
(imaginative
writing)



Book Cover
Redesign

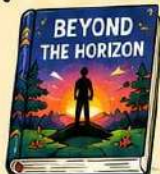


BOOK COVER REDESIGN

Take your favourite book and design a new creative cover page.

Include:

- Title
- Author name
- Attractive illustration
- A catchy tagline.



A new
look for
your
favourite
book!

CREATIVE ACTIVITIES

ACTIVITY 1: KINDNESS ROCK

1. Take a round-shaped stone.
2. Paint it with a light acrylic base colour (peach / orange / baby pink).
3. Once dry, write a kindness quote/thought using a dark permanent marker.

OR

Paste a small printed quote on it.



Your Kindness Rock is now ready for submission.

ACTIVITY 2: ICE CREAM STICK PUZZLE

1. Take some ice cream sticks.
2. Colour one side of the sticks neatly.
3. On the other side, paste a cut-out picture (from magazines, old notebooks, or scrap).
4. Write a short story (6-8 lines) on the coloured side of the sticks.
5. Arrange the sticks properly and secure them using transparent cello tape to form a puzzle.



Once upon a time, there was a little house near the river. It was surrounded by trees and flowers. Birds used to sing every morning...

NOTE:

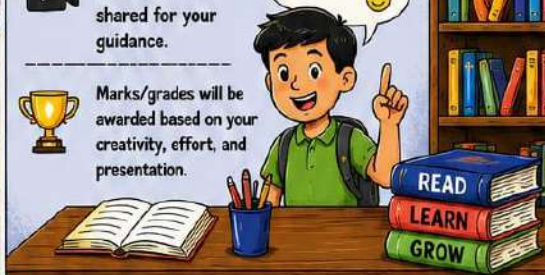


Videos for both activities will be shared for your guidance.



Marks/grades will be awarded based on your creativity, effort, and presentation.

Be Creative,
Have Fun and
Happy Holidays!



PM SHRI KENDRIYA VIDYALAYA KARNAL

SUMMER VACATION HOLIDAY HOMEWORK

CLASS IX - MATHEMATICS

CHAPTERS: COORDINATE GEOMETRY & POLYNOMIALS

INSTRUCTIONS:

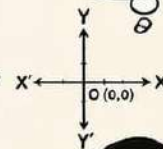
- ✓ Complete all questions neatly in your notebook.
- ✓ Write step-by-step solutions.
- ✓ Revise concepts before solving.
- ✓ Maintain proper handwriting.
- ✓ Draw graphs wherever required.
- ✓ Submit after summer vacation.

1 MARK QUESTIONS (20×1=20)

GO!

Let's Ace it!

- Write the coordinates of the origin.
- In which quadrant does the point $(-3, 4)$ lie?
- Find the abscissa of the point $(5, -2)$.
- Find the ordinate of the point $(-7, 3)$.
- Name the x-axis and y-axis.
- Write the coordinates of a point on x-axis.
- Find the value of p if $(p, 0)$ lies on y-axis.
- Define a polynomial.
- Give an example of a linear polynomial.
- What is the degree of polynomial $5x^2 + 3x + 1$?
- Find the constant term in $4x^3 + 2x + 7$.
- Identify the coefficient of x in $3x^2 + 5x + 1$.
- Is 7 a polynomial?
- Write one example of a binomial.
- What is the degree of constant polynomial?
- Write standard form of a polynomial.
- Identify number of terms in $2x + 3y + 5$.
- Is 0 a polynomial?
- Write one example of quadratic polynomial.
- What is the coefficient of x^2 in $9x^2 + 4x + 6$?



2 MARKS QUESTIONS (10×2=20)

Step by Step!

- Plot the point $(2, 3)$ on a graph paper.
- Find in which quadrant the point $(-5, -6)$ lies.
- Write coordinates of a point on y-axis.
- Find coordinates of a point equidistant from both axes.
- Classify the polynomial $3x^2 + 2x + 1$ based on degree.
- Find the degree of $7x^3 + 2x^2 + x + 9$.
- Write all terms of polynomial $5x^2 + 4x + 3$.
- Identify constant, linear and quadratic terms in $4x^2 + 3x + 2$.
- Write two examples of cubic polynomials.
- Check whether $2x + 3$ is a polynomial.

Be Neat,
Be Smart!

$2x+3$
Polynomial?

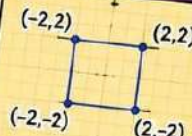
3 MARKS QUESTIONS (5×3=15)

MATH IS FUN!

Think Smart!

- Plot the points $(2,2)$, $(-2,2)$, $(-2,-2)$, $(2,-2)$ and identify the figure formed.
- Find the coordinates of points lying on x-axis and y-axis.
- Classify the polynomial $5x^3 + 3x^2 + 2x + 1$ based on number of terms and degree.
- Find the value of polynomial $2x^2 + 3x + 1$ at $x = 2$.
- Write all coefficients of polynomial $4x^3 - 3x^2 + 2x - 5$.

$5x^3 + 3x^2 + 2x + 1$
Degree = ? Terms = ?

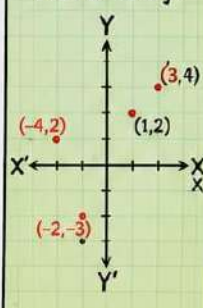


4 MARKS QUESTIONS (5×4=20)

You can do it!

- Plot the points $(1,2)$, $(3,4)$, $(-2,-3)$ and $(-4,2)$ on graph paper and verify their positions.
- Find whether the points $(2,3)$, $(2,-3)$, $(-2,-3)$, $(-2,3)$ form a square.
- Find the zero of the polynomial $x - 5$.
- Verify that $(x + 2)$ is a factor of $x^2 + 5x + 6$.
- Factorize the polynomial $x^2 + 7x + 10$.

Plot & Verify!



Factor it!

$$x^2 + 7x + 10 = (x + 5)(x + 2)$$

REMEMBER:

- ✓ Practice daily
- ✓ Stay curious
- ✓ Maths is awesome!

ALL THE BEST!

P M SHRI KENDRIYA VIDYALAYA KARNAL
HOLIDAY HOMEWORK (SUMMER VACATION 2026-27)
CLASS-VIII
MATHEMATICS

1. Find the relation between square number sequence and triangular number sequence. Explain with 4 terms.
2. Find the square roots of the following by successive subtraction.

S. No.	Square root of the
(i)	25
(ii)	36
(iii)	81
(iv)	64

(eg, Square root of 49=49-1=48,48-3=45,45-5=40,40-7=33,33-9=24,24-11=13,13-13=0 in 7 steps we get 0,therefore square root of 49=7)

3. What is the taxicab number? What is the special about this number?
4. Find the sum of the given odd numbers:(Use the square property)
 - (i) First 10 odd numbers
 - (ii) First 20 odd numbers
 - (iii) First 30 odd numbers
5. Find the square root of the following by prime factorization.
 - (a) 1024 (b) 625 (c) 1296 (d) 576
6. Find the cube root of the following by prime factorization.
 - (a) 1728 (b) 512 (c) 729 (d) 9261
7. Express each of the following as a product of the powers of their prime factors in exponential form. (a) 9261 (b) 5625 (c) 1728
8. Write the following in standard form.
 - (i) 234000000 (ii) 0.0000254

(iii) 3000000 (iv) 0.00000000000000016

9. Simplify and write in exponential form.

(i) $10^{-4} \times 10^{-9}$ (ii) $5^8 \div 5^3$ (iii) $(5^{-8})^{-2}$ (iv) $a^{-4}b^{-3}(a^6b^6)$

10. If $14^2=196$, then what is the value of the following?

(a) 0.000196 (b) 0.0196 (c) 1960000 (d) 19600 (e) 1.96

11. Write and learn tables from 2 to 20.

12. Write and learn squares of numbers from 1 to 25 and cubes of numbers from 1 to 20.

13. Write and learn seven laws of exponents.

Instructions: 1. Do holiday homework in separate notebook.

2. Writing must be neat and clean.

Reading Skills

1. Read 2-3 pages daily from a story book and novel.

Focus on:

- ❖ Pronunciation
- ❖ Fluency
- ❖ Understanding

2. Poorvi (NCERT)

Unit -1: Wit And Wisdom

Chapter: Wit that won Hearts

Poem- A Concrete Example

- ❖ Read above chapters carefully
- ❖ Learn Q/A and vocabulary
- ❖ Revise back exercise.

Writing Skills

1. Write an application to the principal of your school for five days leave.
2. Write a letter to your friend to give him/her congratulation for getting 1st position in painting competition.
3. Write an essay on the topic of "A small act of Kindness that Made a Difference". (A4 size sheet)
4. You are a member of the Nature Club in your school. Draft a notice informing the students of grade 6-8 about inauguration of the Herb Garden.

Speaking skills

Prepare a speech on any following topic:

1. Importance of Education
2. Management of Time

Project Work:

1. Make a mind map of poem: Concrete Example (A4 size sheet).
2. Learn 2 new words daily and prepare a pocket dictionary.

Grammar

1. Noun: Write definition, types and example
2. Pronoun: Write definition, kinds and example
3. Verb: Write 50 forms of verbs.
4. Preposition: Write any 10 prepositions with uses and examples.
5. Write definition of following literary device with examples:
 - Simile
 - Personification
 - Alliteration
6. Write four types of conditional sentences with example.
7. Write 30 opposite words

P M SHRI KENDRIYA VIDYALAYA KARNAL
HOLIDAY HOMEWORK (SUMMER VACATION 2026-27)
CLASS-VIII
MATHEMATICS

1. Find the relation between square number sequence and triangular number sequence. Explain with 4 terms.
2. Find the square roots of the following by successive subtraction.

S. No.	Square root of the
(i)	25
(ii)	36
(iii)	81
(iv)	64

(eg, Square root of 49=49-1=48, 48-3=45, 45-5=40, 40-7=33, 33-9=24, 24-11=13, 13-13=0 in 7 steps we get 0, therefore square root of 49=7)

3. What is the taxicab number? What is the special about this number?
4. Find the sum of the given odd numbers:(Use the square property)
 - (i) First 10 odd numbers
 - (ii) First 20 odd numbers
 - (iii) First 30 odd numbers
5. Find the square root of the following by prime factorization.
 - (a) 1024 (b) 625 (c) 1296 (d) 576
6. Find the cube root of the following by prime factorization.
 - (a) 1728 (b) 512 (c) 729 (d) 9261
7. Express each of the following as a product of the powers of their prime factors in exponential form. (a) 9261 (b) 5625 (c) 1728
8. Write the following in standard form.
 - (i) 234000000 (ii) 0.0000254

(iii) 3000000 (iv) 0.00000000000000016

9. Simplify and write in exponential form.

(i) $10^{-4} \times 10^{-9}$ (ii) $5^8 \div 5^3$ (iii) $(5^{-8})^{-2}$ (iv) $a^{-4}b^{-3}(a^6b^6)$

10. If $14^2=196$, then what is the value of the following?

(a) 0.000196 (b) 0.0196 (c) 1960000 (d) 19600 (e) 1.96

11. Write and learn tables from 2 to 20.

12. Write and learn squares of numbers from 1 to 25 and cubes of numbers from 1 to 20.

13. Write and learn seven laws of exponents.

PM SHRI KENDRIYA VIDYALAYA KARNAL

Summer Vacation Homework : Class VIII Social Science

Subject: Social Science (Geography, History, & Civics)

Academic Session: 2026-27

Textbook Reference: *Exploring India and Beyond* (New NCERT Curriculum)

Duration: May 8, 2026 – June 18, 2026

I. General Guidelines for Students

- The homework must be hand-written and reflect your own creativity and understanding.
- Use your new textbook *Exploring India and Beyond* as your primary reference.
- The completed assignment must be submitted on the first day the school re-opens following the summer break.

II. Project Work & Activity (Choose ONE)

Option 1: The "Resource Conservation" Portfolio

- **The Task:** Conduct a "Resource Audit" of your home. Identify three types of resources: Natural (water/land), Human-made (electricity/furniture), and Human (skills of family members).
- **Documentation:** Create a table listing these resources, their utility, and one way you can prevent their wastage.
- **Visual:** Include a "Save Energy" or "Save Water" sticker designed by you.

III. Written Assignments

Chapter 1: Resources

1. Explain why resources are distributed unequally over the earth.
2. Define **Sustainable Development**. List three principles of sustainable development that you can practice in your daily life.
3. Why are human beings considered the most important resource?

The Political Landscape

Day 1: List all 28 Indian States and their Capitals in your notebook.

Day 2: List the 8 Union Territories (UTs) and their headquarters.

Day 3: Map Skill: On a political map of India, locate and label the 28 states., **World Map Skill:** Locate and label the 5 Oceans.

Day 4: Map Skill: Locate and label the 8 Union Territories., **World Map Skill:** Locate and shade the 7 Continents on a world map.

Day 5: The "Neighbor" Task: Identify and mark the countries that share a land border with India (e.g., Nepal, Bhutan, Bangladesh)., **World Geography:** List the 7 Continents and 5 Oceans of the world.

Review: Practice filling a blank world map from memory.

History - Reshaping the Map

- ✚ Read Chapter 2: "Reshaping the Indian Political Map". Define the term "**Subadari.**"
- ✚ **Successor States:** Write 3 sentences each on the emergence of Awadh, Bengal, and Hyderabad.
- ✚ **Warrior States:** Research the Maratha Confederacy and the Sikh Kingdom under Maharaja Ranjit Singh.
- ✚ **History Map Skill:** Use the map in Chapter 2 to mark the territories of the Marathas and the Sikhs.
- ✚ **The "Company" Arrival:** Mark the three British Presidency towns: Madras, Bombay, and Calcutta.

Phase 2: Empires & Military Strategy

The Delhi Sultanate: Research why the Sultanate rose to prosperity (centralized control, trade) and why it eventually declined (weak successors, Mongol invasions, internal revolts).

Vijayanagara Empire: Write a short note on the "City of Victory." Focus on Hampi, the Vitthala Temple, and their unique Dravidian architecture.

Chapter 2 Focus: Read "Reshaping the Indian Political Map". Define the term **Subadari.**

Military Tactics (Mughals): Describe the Mughal *Manasabdari* system and their use of heavy artillery and massive infantry.

Military Tactics (Marathas): Explain **Ganimi Kava** (Guerrilla Warfare). How did they use geography (forts and hills) to their advantage?

The Comparison: Create a T-chart showing the difference between Mughal (Conventional/Heavy) and Maratha (Mobile/Guerrilla) strategies.

Day 14: Successor States: List how Bengal, Awadh, and Hyderabad became independent from the Mughals.

History Deep Dive: Important Concepts

1. Military Strategy: Mughal vs. Maratha

Feature	Mughal Strategy	Maratha Strategy
Primary Strength	-----	Highly mobile light cavalry.
Tactics	Formal, open-field battles (Conventional).	-----
Geography	Preferred plains for easy movement.	Used rugged Deccan hills and forts.
Focus	Territorial expansion and ----- --	Harassing the enemy and taxing through ---- -----

2. Write about The Vijayanagara Empire (Art & Culture)

Activity: The "Great Rulers of India" Table

Fill in the blanks using your textbook or research.

Name of Ruler	Established Capital	Year (Approx.)	Major Contribution
Qutb-ud-din Aibak	Delhi	1206	Founded the Delhi Sultanate.
Akbar	_____	1556	Introduced the Mansabdari system.
Shivaji Maharaj	Raigad	_____	Pioneered Guerrilla warfare & Naval power.

Name of Ruler	Established Capital	Year (Approx.)	Major Contribution
Krishnadevaraya	Hampi	1509	Built the Vitthala Temple; Golden Age of Art.
Maharaja Ranjit Singh	_____	1799	United the Sikh Misls into a powerful Kingdom.

Guidelines for Submission:

- Handwritten only on separate notebook.
- Submit on the day school re-opens.

संस्कृत अष्टमी कक्षा

1 दो बार वर्णमाला लिखें।

2 कः और का का शब्दरूप लिखे।

3 किन्ही 20 शब्दों का वर्ण विच्छेद करके लिखें।

4 अपने पाठ्य पुस्तक से कोई 50 शब्दों का संधि विच्छेद करके लिखें।

5 कोई 20 समय लिखकर उनको संस्कृत में लिखे और शरीर के अंगों के नाम लिखते हुए एक चार्ट बनाएं।

6 वंदे मातरम गीत संस्कृत में लिखकर हिंदी अर्थ भी लिखे तथा याद करें।

7 अपनी पाठ्य पुस्तक तथा किसी अन्य संस्कृत पुस्तक से कोई 20 श्लोक लिखकर हिंदी में अर्थ लिखें।

8 अपनी डायरी से संस्कृत प्रार्थना और छात्र प्रतिज्ञा दो दो बार लिखकर याद करें

600 × 400

 PM Shri Logo

पी एम श्री केंद्रीय विद्यालय करनाल

ग्रीष्मावकाश गृहकार्य

सत्र: 2026-27 | कक्षा: 8वीं

"21वीं सदी के कौशल: सृजन, संवाद और स्वास्थ्य"

| हमारे मुख्य लक्ष्य (21st Century Skills)



रचनात्मकता

कल्पना को हकीकत में बदलना।



प्रभावी संवाद

अपनी बात स्पष्टता से कहना।



डिजिटल ज्ञान

तकनीक का सही उपयोग करना।

| परियोजना 1: 'बीते कल की कहानियाँ'

कार्य: अपने दादा-दादी या किसी बुजुर्ग का साक्षात्कार (Interview) लें।

- ✓ उनके बचपन के पसंदीदा खेलों के बारे में पूछें।
- ✓ तब की और आज की पढ़ाई में क्या बदलाव आए?
- ✓ इसे एक 'संवाद' के रूप में अपनी डायरी में लिखें।

600 × 400

| परियोजना 2: मेरा स्वदेशी विज्ञापन

 Student drawing a poster

'Vocal for Local'

किसी एक पारंपरिक भारतीय उत्पाद (जैसे- मिट्टी के बर्तन, जूट का थैला या शहद) के लिए एक आकर्षक विज्ञापन तैयार करें।

इसमें एक शानदार 'स्लोगन' और उत्पाद के गुणों का वर्णन होना चाहिए।

| परियोजना 3: प्रकृति का संदेश

कल्पना करें: आप एक "नदी" हैं जो पहाड़ों से मैदान की ओर आ रही है।

मनुष्यों के नाम एक पत्र लिखें जिसमें आप अपनी यात्रा और प्रदूषण के कारण होने वाली अपनी पीड़ा के बारे में बताएँ।

- इस पत्र को पुराने अखबार या रद्दी कागजों से बने लिफाफे में रखें।

विशेष खंड: प्रतिदिन योग और स्वास्थ्य

"स्वस्थ शरीर, प्रखर बुद्धि"

छुट्टियों के दौरान प्रतिदिन सुबह 20-30 मिनट योग का अभ्यास करें।

- ताड़ासन
- वृक्षासन
- भुजंगासन
- अनुलोम-विलोम
- कपालभाति

- योग करते हुए अपनी एक फोटो या छोटा वीडियो जरूर बनाएँ।

 Kids doing yoga outdoors

मेरी योग डायरी (Daily Journal)

प्रतिदिन योग करने के बाद इन तीन सवालों के जवाब अपनी डायरी में लिखें:

दिनांक	आज कौन सा आसन किया?	योग के बाद कैसा लगा?	एक लाभ जो महसूस हुआ
__/06/2026	ताड़ासन	तरोताजा और सक्रिय	एकाग्रता बढ़ी
...	...	...	...

| डिजिटल कौशल: मेरी ऑडियो डायरी

600 × 400

पॉडकास्ट (Podcast)

अपनी छुट्टियों के किसी सबसे यादगार दिन के बारे में 2 मिनट की एक ऑडियो क्लिप रिकॉर्ड करें।

ध्यान रखें कि आपका उच्चारण स्पष्ट हो और आपकी आवाज़ में उत्साह हो।

निर्देश एवं प्रस्तुतीकरण

01

सफाई

कार्य बहुत ही सुंदर और साफ-सुथरा
होना चाहिए।

02

मौलिकता

नकल न करें, अपने अनूठे विचार
लिखें।

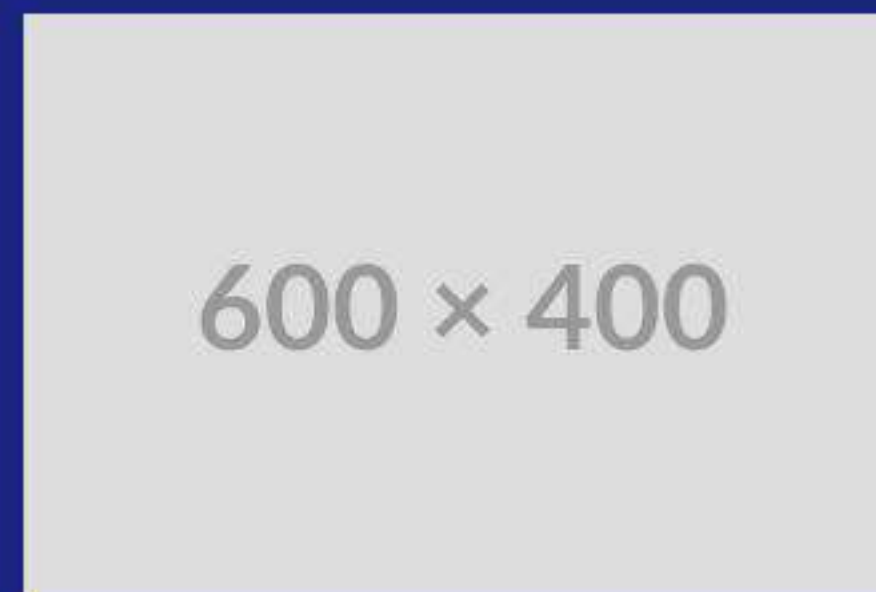
03

समय

जुलाई के पहले सप्ताह में गृहकार्य
जमा करें।

छुट्टियों का आनंद लें!

सीखते रहें और सुरक्षित रहें।



 PM Shri

पी एम श्री केंद्रीय विद्यालय करनाल

"Education is the most powerful weapon..."

Image Sources



<https://www.uxdt.nic.in/wp-content/uploads/2025/04/auto-draft-inner-banner.jpg>

Source: www.uxdt.nic.in



Thumbnail for <https://i.ytimg.com/vi/NHXidlH-dBw/sddefault.jpg>

Source: www.youtube.com
www.youtube.com



https://i.ytimg.com/vi/tgX6llWaeKI/hq720.jpg?sqp=-oaymwEhCK4FEIIDSFryq4qpAxMIARUAAAAAGAEIAADIQj0AgKJD&rs=AOOn4CLDJbM6D0rKe08lo4ijgKt76q_1n4g

Source: www.youtube.com

Holiday Homework – Class 8/9

✨ General Instructions

Use a separate Library notebook for all work
Cover it with pink chart paper
Maintain neat handwriting and proper margins

Write all these questions with description.

Q- Write the difference b/w Newspaper/ Magazine/ Periodicals and book . Explain with examples.
Q- Write the difference between Classics/Folk Tales, Comics and mythological Tales with examples.
Q- Write the difference between Author/Writer and Editor . Explain with examples.
Q- Explain the difference between digital library, E- library and E- content.
Q- list all the children magazines & newspaper available in your school library.
Q- Prepare a list of 10 idioms/ Phrases in English & Hindi related to Reading/ Books/ Book worm.

Write any two :

Short Story (150–200 words)
Poem (any theme)
“A Day Without Books” (imaginative writing)

Book Cover Redesign

Take your favourite book and design a new creative cover page.

Include:

Title
Author name
Attractive illustration
A catchy tagline

Creative activity

Activity 1: Kindness Rock

Take a round-shaped stone.
Paint it with a light acrylic base colour (peach / orange / baby pink).
Once dry, write a kindness quote/thought using a dark permanent marker.
OR
Paste a small printed quote on it.
Your Kindness Rock is now ready for submission.

🍦 Activity 2: Ice Cream Stick Puzzle

Take some ice cream sticks.
Colour one side of the sticks neatly.
On the other side, paste a cut-out picture (from magazines, old notebooks, or scrap).
Write a short story (6–8 lines) on the coloured side of the sticks.
Arrange the sticks properly and secure them using transparent cello tape to form a puzzle.

Note:

Videos for both activities will be shared for your guidance.

Marks/grades will be awarded based on your creativity, effort, and presentation.

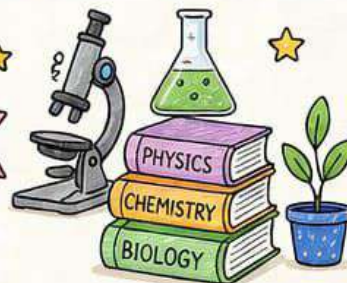
Curiosity
leads to
Discovery!

CLASS 8 - SCIENCE

SUMMER HOLIDAY HOMEWORK

MAY - JUNE 2026

Observe • Explore • Experiment • Understand
Science is Fun!



SECTION A - OBSERVATION & ANALYSIS

1. Task 1: Science Around Me

Observe your surroundings and list:

- ★ 8 natural things
- ★ 8 man-made things



2. Task 2: Daily Science Diary

Write daily:

- ★ Weather conditions
- ★ One scientific observation
- ★ One question based on observation



SECTION B - LIVING WORLD

3. Task 3: Plant Growth Study

Observe a plant for 10 days.

Record:

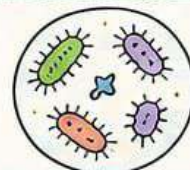
- ★ Growth changes
- ★ Leaf pattern
- ★ Watering schedule



4. Task 4: Microorganisms

Write short notes on:

- ★ Useful microorganisms
- ★ Harmful microorganisms



SECTION C - EXPERIMENTS

5. Task 5: Home Experiments

Perform and record the experiments:

- ★ Separation of substances
- ★ Filtration / Evaporation



For each experiment write:

- ★ Aim
- ★ Materials Required
- ★ Procedure
- ★ Observation
- ★ Conclusion



6. Task 6: Force & Pressure

Observe and note examples of force and pressure from your daily life.



SECTION D - ENVIRONMENT

7. Task 7: Conservation

Write ways to conserve:

- ★ Water
- ★ Electricity



8. Task 8: Pollution Study

Identify different types of pollution.

Write:

- ★ Causes
- ★ Effects
- ★ Solutions



SECTION E - SCIENCE IN DAILY LIFE

9. Task 9: Uses of Science

Write uses of science in:

- ★ Kitchen
- ★ Transport
- ★ Communication



10. Task 10: Energy Sources

List:

- ★ Renewable sources
 - ★ Non-renewable sources
- Give examples and uses.



SECTION F - THINKING SKILLS

11. Task 11: Reasoning Questions

Answer the following:

- ★ Why do metals expand on heating?
- ★ Why is air important for life?



Think
Observe
Reason
Discover

12. Task 12: Science Quiz

Prepare 12 interesting questions based on science concepts and daily life.



SECTION G - CREATIVE ACTIVITIES

13. Task 13: Poster Making

Make a colourful poster on:

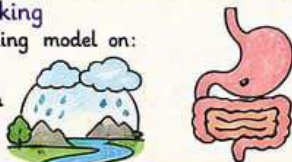
- ★ Save Environment
- ★ Save Energy



14. Task 14: Model Making

Make a working / non-working model on:

- ★ Water cycle
- ★ Human digestive system

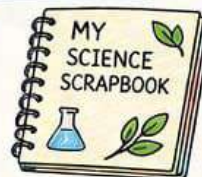


SECTION H - PROJECT WORK

15. Task 15: Science Scrapbook

Make a scrapbook including:

- ★ Diagrams
- ★ Experiments
- ★ Amazing facts
- ★ Interesting information



16. Task 16: Science Around Me

Observe and write:

- ★ Science in kitchen
- ★ Science in home appliances



SUBMISSION GUIDELINES

- ✓ Maintain a neat and well-organized file.
- ✓ Use diagrams, labels and colours.
- ✓ Write observations clearly.
- ✓ Submit after holidays.

Remember!

- ♥ Be curious
- ♥ Be creative
- ♥ Be consistent
- ♥ Enjoy learning Science!



WHY THIS HOMEWORK IS SPECIAL

- ♥ Helps you think scientifically
- ♥ Builds curiosity and confidence
- ♥ Connects science with real life
- ♥ Encourages learning by doing
- ♥ Makes learning meaningful and fun!



EXPLORE TODAY... DISCOVER TOMORROW... CREATE A BETTER FUTURE!

HOLIDAY HOMEWORK

(SUMMER VACATION 2026-27)

CLASS-VIII

MATHEMATICS

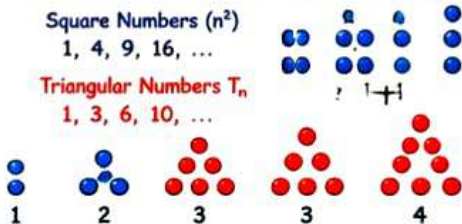
- 1 Find the relation between square number sequence and triangular number sequence. Explain with 4 terms.

Square Numbers (n^2)

1, 4, 9, 16, ...

Triangular Numbers T_n

1, 3, 6, 10, ...



- 2 Find the square roots of the following by successive subtraction.

- (i) 25 (ii) 36
(iii) 81 (iv) 64

eg, Square root of 49=
49-1=48, 48-3=45, 45-5=40,
40-7=33, 33-9=24, 24-11=13,
13-13=0 in 7 steps we get 0,
therefore square root of
49 = 7

- 3 What is the taxicab number?
What is the special about this number?



The smallest taxicab number is 1729.
It can be expressed as the sum of two cubes in two different ways.

$$1729 = 1^3 + 12^3 \\ = 9^3 + 10^3$$

- 4 Find the sum of the given odd numbers:
(Use the square property)

- (i) First 10 odd numbers
(ii) First 20 odd numbers
(iii) First 30 odd numbers

The sum of first n odd numbers
 $= n^2$

- 5 Find the square root of the following by prime factorization.

- (a) 1024 (b) 625
(c) 1296 (d) 576

2	1024
2	512
2	256
2	128
2	64
2	32
2	16
2	8
2	4
2	2
2	1

$$\sqrt{1024} = 32$$

- 6 Find the cube root of the following by prime factorization.

- (a) 1728 (b) 512
(c) 729 (d) 9261

2	1728
2	864
2	432
2	216
2	108
2	54
3	27
3	9
3	3
3	1

$$\sqrt[3]{1728} = 12$$

- 7 Each express each of the following as a product of the powers of their prime factors in exponential form.

- (a) 9261 (b) 5625 (c) 1728

- (a) $9261 = 3^6$
(b) $5625 = 5^4$
(c) $1728 = 2^6 \times 3^3$

- 8 Write the following in standard form.

- (i) 234000000 (ii) 0.0000254
(iii) 3000000 (iv) 0.0000000000000016

- (i) 2.34×10^8
(ii) 2.54×10^{-5}
(iii) 3×10^6
(iv) 1.6×10^{-14}

- 9 Simplify and write in exponential form.

- (i) $10^{-4} \times 10^{-9}$
(ii) $5^8 \div 5^3$
(iii) $(5^{-8})^{-2}$
(iv) $\frac{a^{-4}b^{-3}}{(a^6b^6)}$

- (i) 10^{-13}
(ii) 5^5
(iii) 5^{16}
(iv) $a^{-10}b^{-9}$

- 10 If $14^2 = 196$, then what is the value of the following?

- (a) 0.000196 (b) 0.0196 (c) 1960000
(d) 19600 (e) 1.96

- (a) 0.014^2 (b) 0.14^2 (c) 1400^2
(d) 140^2 (e) 0.14^2

- 11 Write and learn tables from 2 to 20.

2 to 20
Tables

- 12 Write and learn squares of numbers from 1 to 25 and cubes of numbers from 1 to 20.

Squares
 1^2 to 25^2

Cubes
 1^3 to 20^3

- 13 Write and learn seven laws of exponents.

- $a^m \times a^n = a^{m+n}$
- $a^m \div a^n = a^{m-n}$
- $(a^m)^n = a^{mn}$
- $(ab)^n = a^n b^n$
- $\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$
- $a^0 = 1$ ($a \neq 0$)
- $a^{-n} = \frac{1}{a^n}$ ($a \neq 0$)

Practice
Makes
Perfect!

KEEP LEARNING,
KEEP GROWING!



SUMMER BREAK HOLIDAY HOMEWORK

1 NOTICE WRITING (LOST)

Draft a notice to inform all students. You are Rohan/Ramya, Class VIII A. You have lost your water bottle/watch in the school campus.



Include proper notice format (Name of school, NOTICE, Date, Subject, Content, Name & Designation)

2 SICK LEAVE APPLICATION

Write an application to the Principal for two days' sick leave.



Include proper formal letter format (To, Date, Subject, Salutation, Body, Closing)

3 LEAVE APPLICATION (FAMILY EVENT)



- Write an application to the Principal for three days' leave to attend your brother's marriage.

Include proper formal letter format (To, Date, Subject, Salutation, Body, Closing)

4 TLM ACTIVITY

- Prepare one TLM (Teaching Learning)



5 PARTS OF SPEECH

Prepare notes with examples:

- | | |
|------------|----------------|
| • Noun | • Pronoun |
| • Verb | • Adjective |
| • Verb | • Preposition |
| • Adverb | • Conjunction |
| • Drection | • Interjection |



BE CREATIVE, BE NEAT, AND DO YOUR BEST!



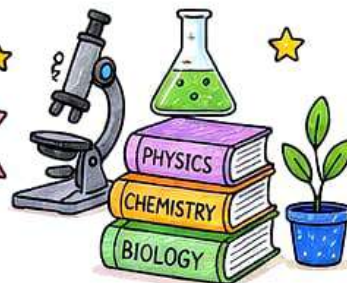
Curiosity
leads to
Discovery!

CLASS 8 - SCIENCE

SUMMER HOLIDAY HOMEWORK

MAY - JUNE 2026

Observe • Explore • Experiment • Understand
Science is Fun!



SECTION A - OBSERVATION & ANALYSIS

1. Task 1: Science Around Me

Observe your surroundings and list:

- ★ 8 natural things
- ★ 8 man-made things



2. Task 2: Daily Science Diary

Write daily:

- ★ Weather conditions
- ★ One scientific observation
- ★ One question based on observation



SECTION B - LIVING WORLD

3. Task 3: Plant Growth Study

Observe a plant for 10 days.

Record:

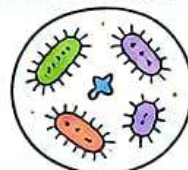
- ★ Growth changes
- ★ Leaf pattern
- ★ Watering schedule



4. Task 4: Microorganisms

Write short notes on:

- ★ Useful microorganisms
- ★ Harmful microorganisms



SECTION C - EXPERIMENTS

5. Task 5: Home Experiments

Perform and record the experiments:

- ★ Separation of substances
- ★ Filtration / Evaporation



For each experiment write:

- ★ Aim
- ★ Materials Required
- ★ Procedure
- ★ Observation
- ★ Conclusion



6. Task 6: Force & Pressure

Observe and note examples of force and pressure from your daily life.



SECTION D - ENVIRONMENT

7. Task 7: Conservation

Write ways to conserve:

- ★ Water
- ★ Electricity



8. Task 8: Pollution Study

Identify different types of pollution.

Write:

- ★ Causes
- ★ Effects
- ★ Solutions



SECTION E - SCIENCE IN DAILY LIFE

9. Task 9: Uses of Science

Write uses of science in:

- ★ Kitchen
- ★ Transport
- ★ Communication



10. Task 10: Energy Sources

List:

- ★ Renewable sources
 - ★ Non-renewable sources
- Give examples and uses.



SECTION F - THINKING SKILLS

11. Task 11: Reasoning Questions

Answer the following:

- ★ Why do metals expand on heating?
- ★ Why is air important for life?



Think
Observe
Reason
Discover

12. Task 12: Science Quiz

Prepare 12 interesting questions based on science concepts and daily life.



SECTION G - CREATIVE ACTIVITIES

13. Task 13: Poster Making

Make a colourful poster on:

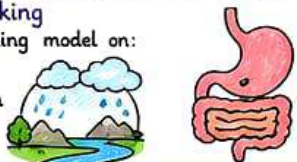
- ★ Save Environment
- ★ Save Energy



14. Task 14: Model Making

Make a working / non-working model on:

- ★ Water cycle
- ★ Human digestive system



SECTION H - PROJECT WORK

15. Task 15: Science Scrapbook

Make a scrapbook including:

- ★ Diagrams
- ★ Experiments
- ★ Amazing facts
- ★ Interesting information



16. Task 16: Science Around Me

Observe and write:

- ★ Science in kitchen
- ★ Science in home appliances



SUBMISSION GUIDELINES

- ✓ Maintain a neat and well-organized file.
- ✓ Use diagrams, labels and colours.
- ✓ Write observations clearly.
- ✓ Submit after holidays.

Remember!

- ♥ Be curious
- ♥ Be creative
- ♥ Be consistent
- ♥ Enjoy learning Science!



WHY THIS HOMEWORK IS SPECIAL

- ♥ Helps you think scientifically
- ♥ Builds curiosity and confidence
- ♥ Connects science with real life
- ♥ Encourages learning by doing
- ♥ Makes learning meaningful and fun!



EXPLORE TODAY... DISCOVER TOMORROW... CREATE A BETTER FUTURE!

Holiday Homework – Class 8/9

General Instructions

Use a separate Library notebook for all work
Cover it with pink chart paper
Maintain neat handwriting and proper margins

Write all these questions with description.

- Q- Write the difference b/w Newspaper/ Magazine/ Periodicals and book . Explain with examples.
- Q- Write the difference between Classics/Folk Tales, Comics and mythological Tales with examples.
- Q- Write the difference between Author/Writer and Editor . Explain with examples.
- Q- Explain the difference between digital library, E- library and E- content.
- Q- list all the children magazines & newspaper available in your school library.
- Q- Prepare a list of 10 idioms/ Phrases in English & Hindi related to Reading/ Books/ Book worm.

Write any two :

- Short Story (150–200 words)
- Poem (any theme)
- “A Day Without Books” (imaginative writing)

Book Cover Redesign

Take your favourite book and design a new creative cover page.

Include:

- Title
- Author name
- Attractive illustration
- A catchy tagline

Creative activity

Activity 1: Kindness Rock

- Take a round-shaped stone.
- Paint it with a light acrylic base colour (peach / orange / baby pink).
- Once dry, write a kindness quote/thought using a dark permanent marker.
- OR
- Paste a small printed quote on it.
- Your Kindness Rock is now ready for submission.

Activity 2: Ice Cream Stick Puzzle

- Take some ice cream sticks.
- Colour one side of the sticks neatly.
- On the other side, paste a cut-out picture (from magazines, old notebooks, or scrap).
- Write a short story (6–8 lines) on the coloured side of the sticks.
- Arrange the sticks properly and secure them using transparent cello tape to form a puzzle.

Note:

Videos for both activities will be shared for your guidance.
Marks/grades will be awarded based on your creativity, effort, and presentation.

पी एम श्री केंद्रीय विद्यालय करनाल

ग्रीष्मावकाश गृहकार्य

सत्र: 2026-27 | कक्षा: 8वीं

"21वीं सदी के कौशल: सृजन, संवाद और स्वास्थ्य"

हमारे मुख्य लक्ष्य (21st Century Skills)



रचनात्मकता

कल्पना को हकीकत में बदलना।



प्रभावी संवाद

अपनी बात स्पष्टता से कहना।



डिजिटल ज्ञान

तकनीक का सही उपयोग करना।

परियोजना 1: 'बीते कल की कहानियाँ'

कार्य: अपने दादा-दादी या किसी बुजुर्ग का साक्षात्कार (Interview) लें।

- ✓ उनके बचपन के पसंदीदा खेलों के बारे में पूछें।
- ✓ तब की और आज की पढ़ाई में क्या बदलाव आए?
- ✓ इसे एक 'संवाद' के रूप में अपनी डायरी में लिखें।

600 × 400

परियोजना 2: मेरा स्वदेशी विज्ञापन

 Student drawing a poster

'Vocal for Local'

किसी एक पारंपरिक भारतीय उत्पाद (जैसे- मिट्टी के बर्तन, जूट का थैला या शहद) के लिए एक आकर्षक विज्ञापन तैयार करें।

इसमें एक शानदार 'स्लोगन' और उत्पाद के गुणों का वर्णन होना चाहिए।

परियोजना 3: प्रकृति का संदेश

कल्पना करें: आप एक "नदी" हैं जो पहाड़ों से मैदान की ओर आ रही है।

मनुष्यों के नाम एक पत्र लिखें जिसमें आप अपनी यात्रा और प्रदूषण के कारण होने वाली अपनी पीड़ा के बारे में बताएँ।

- इस पत्र को पुराने अखबार या रद्दी कागजों से बने लिफाफे में रखें।

विशेष खंड: प्रतिदिन योग और स्वास्थ्य

 Kids doing yoga outdoors

"स्वस्थ शरीर, प्रखर बुद्धि"

छुट्टियों के दौरान प्रतिदिन सुबह 20-30 मिनट योग का अभ्यास करें।

- ताड़ासन
- वृक्षासन
- भुजंगासन
- अनुलोम-विलोम
- कपालभाति

- योग करते हुए अपनी एक फोटो या छोटा वीडियो जरूर बनाएँ।

मेरी योग डायरी (Daily Journal)

प्रतिदिन योग करने के बाद इन तीन सवालों के जवाब अपनी डायरी में लिखें:

दिनांक	आज कौन सा आसन किया?	योग के बाद कैसा लगा?	एक लाभ जो महसूस हुआ
___/06/2026	ताड़ासन	तरोताजा और सक्रिय	एकाग्रता बढ़ी
..	..	..	..

डिजिटल कौशल: मेरी ऑडियो डायरी

600 × 400

पॉडकास्ट (Podcast)

अपनी छुट्टियों के किसी सबसे यादगार दिन के बारे में 2 मिनट की एक ऑडियो क्लिप रिकॉर्ड करें।

ध्यान रखें कि आपका उच्चारण स्पष्ट हो और आपकी आवाज़ में उत्साह हो।

निर्देश एवं प्रस्तुतीकरण

01

सफाई

कार्य बहुत ही सुंदर और साफ-सुथरा होना चाहिए।

02

मौलिकता

नकल न करें, अपने अनूठे विचार लिखें।

03

समय

जुलाई के पहले सप्ताह में गृहकार्य जमा करें।

CLASS – VIII
SOCIAL SCIENCE

1. Map work-

- (i) Label and locate states and union territories with their capitals on India Map and paste in your notebook.**
 - (ii) Label and locate Continents and Oceans on World Map and paste in your notebook.**
- 2. Write the Fundamental Rights and Fundamental Duties of the Indian Constitution.**
 - 3. Write about a tourist place of India which you like the most.**
 - 4. What is the main purpose of the International Solar Alliance (IASA), launched by India and France?**
 - 5. How can India avoid the ‘Natural Resource Curse’?**
 - 6. Differentiate between the administration under Delhi sultanate and under Mughal empire.**
 - 7. Write a paragraph on World Environment Day (5 June).**
 - 8. What are renewable resources? How are they different from non-renewable ones? What can people do to ensure that renewable resources continue to be available for our use and that of future generations? Give two examples.**
 - 9. Write about on a local historical place nearby you.**
 - 10. Write and learn the ‘Preamble’ of the Indian Constitution.**
 - 11. What are some considerations to keep in mind in the production of goods for current use?**
 - 12. Complete your Social Science MDP work. (Artificial Intelligence in Daily Life).**

P M SHRI KENDRIYA VIDYALAYA KARNAL
HOLIDAY HOMEWORK (SUMMER VACATION 2026-27)
CLASS-X
MATHEMATICS

1 Express each number as product of its prime factors.
a. 140 b. 156 c. 3825
d. 5005 e. 7429

2 Check whether $6n$ can end with the digit 0 for any natural number n .

Let's think...
 $6n = 0, 6, 12, 18, \dots$
Never ends with 0!

Prime factors rock!

3 Prove that following numbers are irrational:
a. $\sqrt{3}$ b. $\sqrt{6}$
c. $2 + \sqrt{5}$
d. $3 - 5\sqrt{7}$

Proof time!

4 HCF of two numbers is 113 their LCM is 56952. If one number is 904, then find other number.

LCM $\times$ HCF = Product of numbers

5 Given that HCF(306, 657) = 9, find LCM (306, 657).

Use the formula!

6 If α and β are zeros of $x^2 + 5x + 8$, then find the value of
a. $(\alpha + \beta)$ b. $\alpha \times \beta$
c. $\frac{1}{\alpha} + \frac{1}{\beta}$ d. $\frac{\beta}{\alpha} + \frac{\alpha}{\beta}$

7 The sum and product of the zeros of a quadratic polynomial are given respectively. Form the polynomial:
a. 2, -3 b. $\frac{1}{2}, \frac{1}{3}$
c. $2\sqrt{5}, 3\sqrt{5}$

8 If zeros of a quadratic polynomial are given then form the quadratic polynomial:
a. -4, -5 b. $\frac{2}{3}, \frac{1}{2}$
c. $2 + \sqrt{5}, 2 - \sqrt{5}$

9 If, $P(x) = 2x^2 - 3x + 5$, then find value of:
a. $P(-2)$ b. $P(0)$ c. $P(-\sqrt{3})$

10 Form the pair of linear equations in the following problems, and find their solutions graphically.

a. 10 students of class X took part in a Mathematics quiz. If the number of girls is 4 more than the number of boys, find the number of boys and girls.

b. 5 pencils and 7 pens together cost Rs. 50, whereas 7 pencils and 5 pens together cost Rs. 46. Find the cost of one pencil and that of one pen.

11 On comparing the ratios $\frac{a_1}{a_2}$, $\frac{b_1}{b_2}$ and $\frac{c_1}{c_2}$, find out whether the lines representing the following pairs of linear equations are parallel, coincident or intersecting.
a. $5x - 4y + 8 = 0$, $7x + 6y - 9 = 0$
b. $9x + 3y + 12 = 0$, $18x + 6y + 24 = 0$

Compare ratios!

12 Draw the graphs of the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the axes, and shade the triangular region.

Find the vertices and shade!

13 Solve the following pair of linear equations by the substitution method.
a. $2x + 3y = 7$, $4x - y = 8$
b. $5x - 4y = 9$, $6x + 5y = 8$

Substitute and solve!

14 For which values of p and q , will the following pair of linear equations have infinitely many solutions?
 $4x + 5y = 2$,
 $(2p + 7q)x + (p + 8q)y = 2q - p + 1$

Use condition:
 $\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$

15 Solve the following pair of linear equations:
 $21x + 47y = 110$
 $47x + 21y = 162$

Elimination method works!

16 Find the solution of the pair of equations
 $\frac{x}{10} + \frac{y}{5} - 1 = 0$, $\frac{x}{8} + \frac{y}{6} = 15$

Fractions? No problem!

17 Two years ago, Salim was thrice as old as his daughter and six years later, he will be four years older than twice her age. How old are they now?

Let present ages be S (Salim) and D (daughter)

18 Two numbers are in the ratio 5 : 6. If 8 is subtracted from each of the numbers, the ratio becomes 4 : 5. Find the numbers.

Let numbers be $5x$ and $6x$

19 A shopkeeper gives books on rent for reading. She takes a fixed charge for the first two days, and an additional charge for each day thereafter. Latika paid Rs. 22 for a book kept for six days, while Anand paid Rs. 164 for the book kept for four days. Find the fixed charges and the charge for each extra day.

Fixed charge + extra per day

20 The sum of areas of two squares is 468 m^2 . If the difference of their perimeters is 24 cm, find the sides of the two squares.

Let sides be a and b .

Area: a^2 and b^2
Perimeter: $4a$ and $4b$



P M SHRI KENDRIYA VIDYALAYA KARNAL

HOLIDAY HOMEWORK

CLASS 10TH

1

PREPARE A PORTFOLIO OF YOUR OWN.

Include the following:

- Your name, class, section, roll number
- Passport size photograph
- Personal details (hobbies, strengths, goals, achievements)
- Favourite book/author
- Learning goals for the year
- Self-introduction



2

MAKE MIND MAPS OF THE FOLLOWING CHAPTERS/POEMS

- A Letter to God
- Dust of Snow
- Fire and Ice
- A Tiger in the Zoo
- A Triumph of Surgery
- Nelson Mandela: Long Walk to Freedom



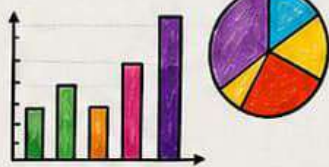
Include: Themes, Characters, Summary, Important Messages, Literary Devices (for poems)

3

WRITE FIVE ANALYTICAL PARAGRAPHS

Write one paragraph each based on:

- Bar Graph
- Pie Chart
- Flow Chart
- Survey Report
- Tabular Data / Comparative Data



Each paragraph should include:
Introduction, Key observations, Comparison, Conclusion

4

PREPARE ONE WORKSHEET EACH ON GRAMMAR TOPICS

- Tenses
- Modals
- Determiners

Each worksheet should contain:

- Fill in the blanks
- Multiple choice questions
- Error correction
- Sentence transformation



5

VALUE BASED QUESTIONS ?

A

You have read about Lencho in 'A Letter to God'.

How has the story of Lencho moved you? What do you think about Lencho's faith in God and his attitude towards the officials in the post office? Discuss his actions and write in your own words why he does so?

B

Discuss the significance of freedom for mankind and its role in the advancement of humanism and civilisation as outlined in the lesson 'Nelson Mandela: A Long Walk to Freedom'.



"Education is the most powerful weapon which you can use to change the world."

— Nelson Mandela



"BE CURIOUS, BE CREATIVE AND DO YOUR BEST!"



CLASS - X

HOLIDAY HOMEWORK

SUBJECT: ARTIFICIAL INTELLIGENCE

Write the answers of following questions in the Classwork notebook and learn.

Let's Learn AI The Smart Way!

- 1 Explain various types of intelligence in human being.
- 2 Write the real life examples of various domains of Artificial intelligence?
- 3 What is Deep Learning, and how is it used in real-world?
- 4 What is AI Ethics?
- 5 What is a AI Bias?
- 6 What exactly is machine learning? Include 2 examples of how machine learning is used in everyday life.
- 7 Explain Artificial Neural Network and its various layers.
- 8 What are various elements of a communication cycle?
- 9 What is 7 C's effective communication?
- 10 List the various methods of communication.
- 11 What is the difference between verbal and non-verbal communication? Give 3-3 examples of each type.
- 12 Explain the barriers of Effective Communication?
- 13 What is feedback in communication skills? Write its types.

EFFECTIVE COMMUNICATION

TYPES OF FEEDBACK

POSITIVE FEEDBACK



Appreciation that encourages and motivates.

NEGATIVE FEEDBACK



Constructive suggestions for improvement.

- 14 A healthcare provider wants to improve patient care by predicting the length of hospital stays for different medical conditions. They have a dataset containing patient demographics, medical history, and treatment details. The task involves:

a)



To predict whether a patient will have a short or long hospital stay.

CLASSIFICATION MODEL
(Predicts a category Short or Long)

b)



To predict the number of days a patient will stay in the hospital.

REGRESSION MODEL
(Predicts a continuous value - number of days)

c)



To segment patients into groups with similar characteristics for personalized treatment plans.

CLUSTERING MODEL
(Finds groups/segments of similar patients)

d)



To identify patterns in patient treatments and outcomes.

ASSOCIATION MODEL
(Finds relationships/patterns in data)



Identify the type of model (classification, regression, clustering, and association model) in the above tasks.

- 15 Identify the type of learning (supervised, unsupervised, reinforcement learning) and justify the following case studies most likely based on?



Case Study 1:

An online learning platform wants to predict student performance in upcoming tests based on their previous quiz scores, course engagement data, and demographic information. The platform has labelled data indicating whether students passed or failed in past tests.

SUPERVISED LEARNING (Classification)

Why: Uses labelled data (pass/fail) to predict outcomes.



Case Study 2:

A factory installs sensors on machines to collect data such as temperature, vibration, and noise levels. They want to detect abnormal machine behavior that could indicate a malfunction. They do not have labelled examples of failures but want to monitor anomalies in real-time.

UNSUPERVISED LEARNING (Anomaly Detection)

Why: No labelled data; identifies unusual patterns or anomalies.



Case Study 3:

A farming organization wants to optimize irrigation by using a drone that learns to adjust water levels based on crop health, weather conditions, and soil moisture. The drone receives a reward when crop yield improves and a penalty when overwatering occurs.

REINFORCEMENT LEARNING

Why: Learns by trial and error using rewards and penalties to maximize outcomes.



Case Study 4:

A retail chain wants to segment its customers based on their purchasing habits to tailor marketing campaigns. They have large amounts of transaction data but no predefined customer segments.

UNSUPERVISED LEARNING (Clustering)

Why: Groups customers based on similarities without predefined labels.

PM SHRI KENDRIYA VIDYALAYA, KARNAL

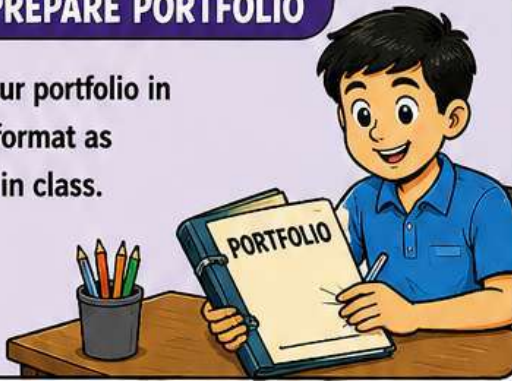
Academic Year 2026-27

CLASS – X | SUB – SCIENCE

SUMMER VACATION HOMEWORK

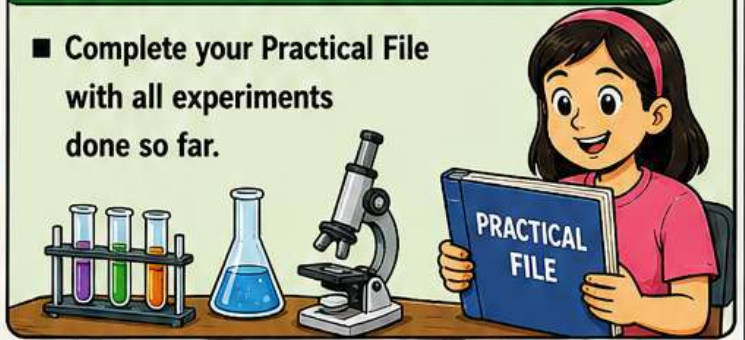
Task 1 – PREPARE PORTFOLIO

- Prepare your portfolio in the given format as instructed in class.



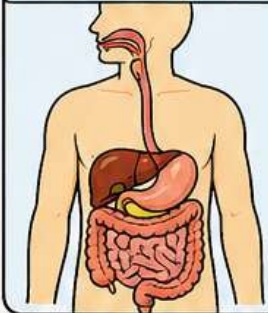
Task 2 – COMPLETE PRACTICAL FILE

- Complete your Practical File with all experiments done so far.

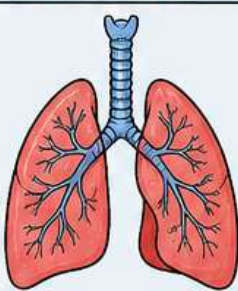


Task 3 – PRACTICE DIAGRAMS

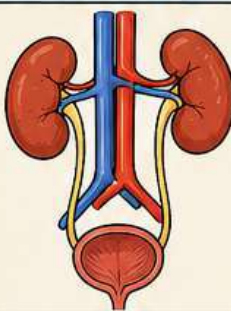
(a) Human Digestive System



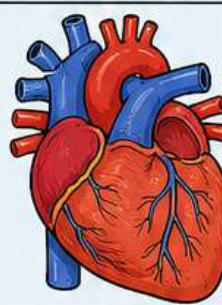
(b) Human Respiratory System



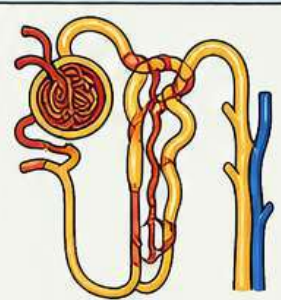
(c) Human Excretory System



(d) ♥ Heart

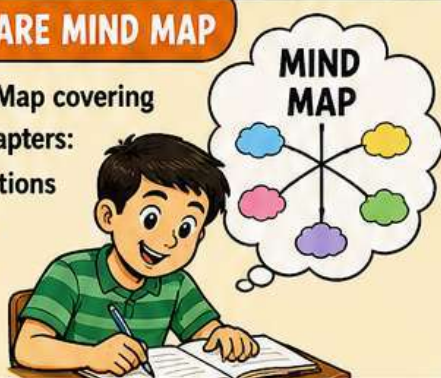


(e) Nephron



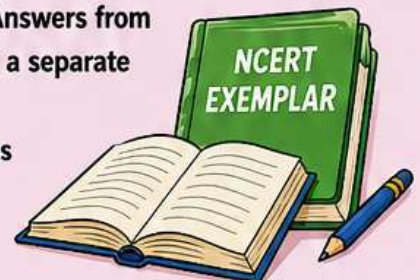
Task 4 – PREPARE MIND MAP

- Prepare a Mind Map covering the following chapters:
 - Chemical Reactions and Equations
 - Life Processes



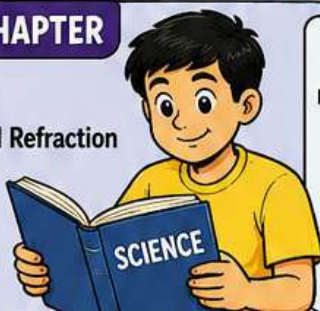
Task 5 – NCERT EXEMPLAR PRACTICE

- Practice Question-Answers from NCERT Exemplar in a separate notebook for:
 - Chemical Reactions and Equations
 - Life Processes

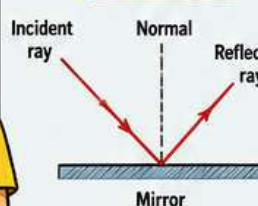


Task 6 – READ CHAPTER

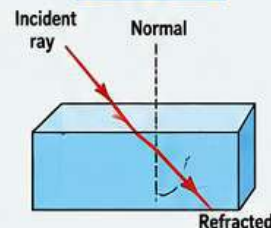
- Read the chapter on Light – Reflection and Refraction thoroughly.



REFLECTION



REFRACTION



Light shows us amazing phenomena!



Complete all tasks neatly and submit on time.

Happy Holidays!

ग्रीष्मकालीन
अवकाश के लिए
गृह कार्य..

विषय - हिन्दी

कक्षा - दसवीं

लेखन - कार्य

-- औपचारिक पत्र लिखिए।

1 देश के किसी प्रतिष्ठित समाचार पत्र के संपादक को समाचार पत्रों में छापे जाने वाले भ्रामक विज्ञापनों पर अपनी चिंता व्यक्त करते हुए संपादक के नाम पत्र लिखो।



2 आपके शहर में लगातार बिजली जाने से छात्रों की पढ़ाई में समस्या आ रही है। जिसके कारण छात्रों को परीक्षाओं की तैयारी करने में परेशानी हो रही है। इसलिए बिजली के बार-बार जाने की समस्या का समाधान करने के लिए आपके शहर के नगर निगम के बिजली विभाग के अधीक्षक को पत्र लिखो।



-- अनौपचारिक पत्र लिखिए।

3 अपने बड़े भाई द्वारा नीट की परीक्षा को उत्तीर्ण कर चयन होने पर बधाई पत्र लिखो।



4 आपकी बड़ी बहन विदेश में उच्च शिक्षा के लिए जा रही हैं। उसके उज्ज्वल भविष्य की कामना हेतु बड़ी बहन का हौसला बढ़ाने के लिए अनौपचारिक पत्र लिखो।



--- सरल वाक्य के दस उदाहरण लिखने हैं।



--- संयुक्त वाक्य के दस उदाहरण लिखने हैं।



--- मिश्रित वाक्य के दस उदाहरण लिखने हैं।



--- फाईल में अपना फोर्टफोलिओ बनाओ हैं।



--- निम्न में से किसी एक विषय पर फाईल में परियोजना कार्य बनाओ।

- 1 नेताजी का चश्मा पाठ के आधार पर सुभाषचंद्र बोस के भारतीय स्वतंत्रता संग्राम में योगदान का सचित्र वर्णन करो।
- 2 बालगोबिन भगत पाठ के आधार पर भारतीय संस्कृति में भक्ति कालीन कवि कबीर के समाज पर प्रभाव का सचित्र वर्णन करो।
- 3 राम-लक्ष्मण-परशुराम संवाद के आधार पर तुलसीदास जी के साहित्यिक परिचय का सचित्र वर्णन करो।
- 4 उद्धव-गोपी संवाद कविता के आधार पर सुरदास जी की कृष्ण भक्ति का सचित्र वर्णन करो।



याद करने का कार्य



पाठ्यपुस्तक क्षितिज भाग 2 से

- ★ पाठ - 1 पद (सुरदास)
- ★ पाठ - 7 नेताजी का चश्मा
- ★ पाठ - 8 बालगोबिन भगत



SUMMER VACATION HOMEWORK (2026-27)

PM SHRI KENDRIYA VIDYALAYA KARNAL

CLASS: X
SUBJECT: SOCIAL SCIENCE

Let's learn, create and grow!

1

PROJECT GUIDELINES

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

CONSUMER RIGHTS



SUSTAINABLE DEVELOPMENT



OR

The project must include: cover page, certificate, index, supporting, images, graph, data etc should be included.

NOTE: use 12-20 A4 Size sheet/paper.

2

ART INTEGRATED PROJECT

Prepare an Art Integrated Project on the topic **"FREEDOM FIGHTERS OF TELANGANA"**.

NOTE: use 10 - 15 A4 Size paper.

TELANGANA

3

MAP WORK

Locate and label all the map items covered in syllabus of the following states on the political map of India. Use one map for two states only. (Total five maps)

PASTE THESE MAPS IN YOUR CLASS WORK NOTEBOOK AS A PAGE.

1 GUJRAT, CHHATISGARH



2 JHARKHAND, MAHARASTRA



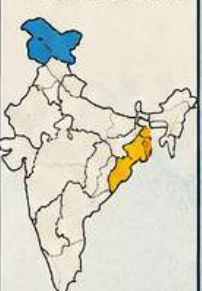
3 TAMILNADU, UTTARPRADESH



4 KARNATAKA, ODISA



5 WEST BENGAL, JAMMU KASHMIR



4

READ AND NOTES

Read the given chapters carefully and write Notes of these chapters in your class notebook as a holidays homework.

1. FEDERALISM
2. POLITICAL PARTIES
3. SECTORS OF INDIAN ECONOMY
4. MONEY AND CREDIT
5. GLOBALISATION AND INDIAN ECONOMY
6. RESOURCES AND DEVELOPMENT

Read, Understand and Write Neatly!

USE YOUR TIME WISELY, BE CREATIVE AND COMPLETE ALL TASKS WITH SINCERITY!

Happy Holidays! Keep Learning, Keep Growing!

ALL THE BEST!

HOLIDAYS HOMEWORK FOR CLASS XII(Info Pract.) Summer break
(08-05-2026 to 16-05-2026)

1. Try to solve all the worksheets provided to you.
2. Prepare well for Monthly test to be held in June(Chapter Python Pandas)
3. Run programs from all the Programming chapters at home on system or mobile app.
4. Search for your Python project to be developed for final practical exam & do practical in notebook
5. Visit the website pythontrends, pythonmykvs.in and go through the contents
6. LEARN AND WRITE THE FULLFORMS PROVIDED AT THE END
7. Do all questions in notebook.8.Solve Question Paper of Monthly test in notebook.

Q No.	Question
1	What will be the output of the following: import pandas as pd D={'a':10,'b':11,'c':12} S=pd.Series(D,index=['b','c','d','a']) print(S)
2	What is the output of the following program: import pandas as pd import numpy as np data=np.array(['Mon','Tue','Wed','Thu','Fri','Sat','Sun']) s=pd.Series(data, index=[101,102,103,104,105,106,107]) print(s[[103,105,107]])
3	What do you mean by Series in Python? Give all the methods of creating series in pandas.
4	Explain all the attributes and methods of series in pandas.
5	Consider the following Series object "S1" and write the output of the following statement: import pandas as pd L1=[21, 41, 62, 81, 23, 45, 68, 89] S1 = pd.Series(L1) print("1. ",S1.index) print("2. ",S1.values) print("3. ",S1.shape) print("4. ",S1.ndim) print("5. ",S1.size) print("6. ",S1.nbytes) print("7. ",S1[0]) print("8. ",S1[2]+S1[0]) print("9. ",S1[5]**2) print("10. ",S1.empty) print("11.\n",S1[[1, 5, 6]]) print("12.\n",S1[5 : 7],"\n") print("13.\n",S1[: -1]) print("14.\n",S1>60) print("15.\n",S1[S1>60]) print("16.\n",len(S1))

	<pre>print("17.\n",S1.count()) print("18.\n",S1.head()) print("19.\n",S1.tail()) print("20.\n",S1[4:5] + S1[4:5])</pre>																														
6	What is DataFrame? Explain all the methods of creating a data frame With examples.																														
7	Explain all the attributes and methods of DataFrame in pandas.																														
8	Write a Python code to create a DataFrame with appropriate column headings from the list given below: [[1001,'IND-AUS','2022-10-17'], [1002,'IND-PAK','2022-10-23'], [1003,'IND-SA' , '2022-10-30'], [1004,'IND-NZ','2022-11-18']]																														
9	Consider the given DataFrame 'Items': <table><tr><th></th><th>Name</th><th>Price</th><th>Quantity</th></tr><tr><td>0</td><td>CPU</td><td>7750</td><td>15</td></tr><tr><td>1</td><td>Watch</td><td>475</td><td>50</td></tr><tr><td>2</td><td>Key Board</td><td>225</td><td>25</td></tr><tr><td>3</td><td>Mouse</td><td>150</td><td>20</td></tr></table> Write suitable Python statements for the following: i) Add a column called Sale_Price which is 10% decreased value of Price ii) Add a new item named "Printer" having price 8000 and Quantity as 10. iii) Remove the column Quantity		Name	Price	Quantity	0	CPU	7750	15	1	Watch	475	50	2	Key Board	225	25	3	Mouse	150	20										
	Name	Price	Quantity																												
0	CPU	7750	15																												
1	Watch	475	50																												
2	Key Board	225	25																												
3	Mouse	150	20																												
10	Consider the following DataFrame, DF <table><tr><th></th><th>Rollno</th><th>Name</th><th>Class</th><th>Section</th><th>CGPA</th></tr><tr><td>St1</td><td>1</td><td>Aman</td><td>IX</td><td>E</td><td>8.7</td></tr><tr><td>St2</td><td>2</td><td>Preeti</td><td>X</td><td>F</td><td>8.9</td></tr><tr><td>St3</td><td>3</td><td>Kartikey</td><td>IX</td><td>D</td><td>9.2</td></tr><tr><td>St4</td><td>4</td><td>Lakshay</td><td>X</td><td>A</td><td>9.4</td></tr></table> Write commands to : i. Add a new column 'Stream' to the Dataframe with values (Science, Commerce, Arts, Science.) ii. Add a new row with values (5 , Mridula ,X, F , 9.8, Science)		Rollno	Name	Class	Section	CGPA	St1	1	Aman	IX	E	8.7	St2	2	Preeti	X	F	8.9	St3	3	Kartikey	IX	D	9.2	St4	4	Lakshay	X	A	9.4
	Rollno	Name	Class	Section	CGPA																										
St1	1	Aman	IX	E	8.7																										
St2	2	Preeti	X	F	8.9																										
St3	3	Kartikey	IX	D	9.2																										
St4	4	Lakshay	X	A	9.4																										
11	Consider the following DataFrame "HOSPITAL" <table><tr><th></th><th>City</th><th>Hospitals</th><th>schools</th></tr><tr><td>0</td><td>Delhi</td><td>189</td><td>7916</td></tr><tr><td>1</td><td>Mumbai</td><td>208</td><td>8508</td></tr><tr><td>2</td><td>Kolkata</td><td>149</td><td>7226</td></tr><tr><td>3</td><td>Chennai</td><td>157</td><td>7617</td></tr></table> Write python pandas code to create the above dataframe HOSPITAL		City	Hospitals	schools	0	Delhi	189	7916	1	Mumbai	208	8508	2	Kolkata	149	7226	3	Chennai	157	7617										
	City	Hospitals	schools																												
0	Delhi	189	7916																												
1	Mumbai	208	8508																												
2	Kolkata	149	7226																												
3	Chennai	157	7617																												
12	Carefully observe the following code: import pandas as pd D1={'S1': 'India', 'S2': 'Russia', 'S3': 'World'} D2={'School': 'EOIS', 'Place': 'Moscow'} data={1:D1,2:D2} df=pd.DataFrame(data) print(df) Answer the following i. List the index of the DataFrame df ii. List the column names of DataFrame df																														
13	Consider the given DataFrame 'Market': <table><tr><th></th><th>Name</th><th>S_Price</th></tr><tr><td>0</td><td>Apple</td><td>220</td></tr><tr><td>1</td><td>Banana</td><td>45</td></tr></table>		Name	S_Price	0	Apple	220	1	Banana	45																					
	Name	S_Price																													
0	Apple	220																													
1	Banana	45																													

	2 Orange 160 Write suitable Python statements for the following: i. Add a new item named 'Guava' having price 175. ii. Add a column called Margin with the following data: [80,13,50,30]. iii. Remove the column Margin.															
14	Mr. Roshan, a data analyst has designed the DataFrame df that contains data about sales made by 4 salesmans in two half yearly as shown below. Create the dataframe and Answer the following questions: <table><tr><td></td><td>First</td><td>Second</td></tr><tr><td>Salesman1</td><td>23000</td><td>18000</td></tr><tr><td>Salesman2</td><td>11000</td><td>15000</td></tr><tr><td>Salesman3</td><td>60000</td><td>40000</td></tr><tr><td>Salesman4</td><td>35000</td><td>12000</td></tr></table> Predict the output of the following python statement: i. df.shape ii. df[1:3]		First	Second	Salesman1	23000	18000	Salesman2	11000	15000	Salesman3	60000	40000	Salesman4	35000	12000
	First	Second														
Salesman1	23000	18000														
Salesman2	11000	15000														
Salesman3	60000	40000														
Salesman4	35000	12000														
15	Given the following Series1 A 100 B 200 C 300 D 400 E 500 Write the command to create above Series and then double the value in series and store in another series named Series2															
16	Consider a given Series named Series1: 200 700 201 700 202 700 203 700 204 700 Write a program in Python Pandas to create the series and display it.															
17	What will be the output produced by the following programming statements 1 & 2? <pre>import pandas as pd S1=pd.Series(data=[31,41,51]) print(S1>40) -->Statement1 print(S1[S1>40]) -->Statement2</pre>															
18	Given the following Series S1 and S2: <table><tr><td>S1</td><td>S2</td></tr><tr><td>A 10</td><td>A 5</td></tr><tr><td>B 20</td><td>B 4</td></tr><tr><td>C 30</td><td>C 6</td></tr><tr><td>D 40</td><td>D 8</td></tr></table> Write the command to find the multiplication of series S1 and S2	S1	S2	A 10	A 5	B 20	B 4	C 30	C 6	D 40	D 8					
S1	S2															
A 10	A 5															
B 20	B 4															
C 30	C 6															
D 40	D 8															
19	Consider two objects a and b. a is a list whereas b is a Series. Both have values 10,20,25,50. What will be the output of the following two statements considering that the above objects have been created already a. print(a*2) b. print(b*2) Justify your answer.															
20	Given a Pandas series called Sample, the command which will display the last 3 rows is . a. print(Sample.tail(3))															

	b. print(Sample.Tail(3)) c. print(Sample.tails(3)) d. print(Sample.Tails(3))
21	What will be the output of the following code? import pandas as pd s = pd.Series(6,index=range(0,5)) print(s)
22	What will be the output of the following code? import pandas as pd import numpy as np s = pd.Series(np.arange(10,50,10)) print(s) print (s.ndim) print(s.shape) print(len(s))
23	Predict the output of the following code. import pandas as pd import numpy as np data = {'one':'a','two':'b','three':'c'} s=pd.Series(data) print(s) print(s.size)
24	Write the output of the following code fragment. import pandas as pd s2=pd.Series(["i","am", "a","student"]) print(s2)
25	A Series object trainingdata consists of 2000 rows of data. Write a program to print (i) First 100 rows of data (ii) Last 5 rows of data
26	Consider the following Series s3- a 1.5 b 3.0 c 4.5 d 6.0 e 7.5 Now create the above series and find the output of the following commands i) print(s3+3) ii) print(s3*2) iii) print(s3>3.0) iv) print(s3[s3>3.0])
27	Number of students in class 11 and 12 in three streams('Science', 'Commerce' and 'Humanities') are stored in two series objects c11 and c12. write code to find total number of students in class 11 and 12 , stream wise.
28	Consider the series s1 and s2 and s3- S1 S2 S3 0 10 0 5 a 3 1 20 1 10 b 6 2 30 2 15 c 9 3 40 3 20 d 10 4 50 4 25 e 11 5 30 6 35 Now find the output of the following- i) print(S1+S2) ii) print(S1*S3) iii) print(S1-S2)

29	Given a Series object shown below: A 6700 B 8000 C 5400 D 3400 dtype : int64 Why is following code producing error while working on Series object s13? <pre>import pandas as pd s13.index=range(0,5) print(s13)</pre>
30	What will be the output of the following program: <pre>import pandas as pd first=[7,8,9] second=pd.Series(first) s1=pd.Series(data=first*2) s2=pd.Series(data=second*2) print("Series1:") print(s1) print("Series2:") print(s2)</pre>



पी एम श्री केंद्रीय विद्यालय कर्नाल

ग्रीष्मावकाश गृहकार्य - **सत्र 2026-27**

कक्षा: 12वीं (वरिष्ठ माध्यमिक)

"अनुसंधान, कौशल और स्वास्थ्य के साथ भविष्य की ओर..."

21वीं सदी के कौशल (Skills for Future)



सूचना साक्षरता

विभिन्न स्रोतों से प्रामाणिक जानकारी का विश्लेषण और चयन करना ।



डिजिटल सृजन

पोर्टफोलियो और शोध कार्यों के लिए डिजिटल उपकरणों का उपयोग ।



स्व-प्रबंधन

योग और ध्यान द्वारा एकाग्रता और तनाव प्रबंधन का अभ्यास ।

| परियोजना 1: करियर रोडमैप

लक्ष्य: CUET और अन्य राष्ट्रीय स्तर की परीक्षाओं की तैयारी के लिए शोध करना ।

- ✓ शीर्ष 5 विश्वविद्यालयों का चयन करें ।
- ✓ उनके लिए आवश्यक विषयों और योग्यता का विवरण लिखें ।
- ✓ एक डिजिटल करियर पोर्टफोलियो बनाएँ ।



परियोजना 2: सामाजिक सर्वेक्षण



डेटा विश्लेषण (Data Analysis)

अपने आसपास के 10 घरों का सर्वेक्षण करें और ****'डिजिटल स्वास्थ्य एवं कल्याण'** के प्रति उनकी जागरूकता का डेटा एकत्र करें ।

डेटा को प्रदर्शित करने के लिए ****Bar Chart**** या ****Pie Chart**** का प्रयोग करें ।

परियोजना 3: ग्रीन ऑडिट

पर्यावरण उत्तरदायित्व: अपने घर में जल और बिजली के उपयोग का 'ग्रीन ऑडिट' करें ।

संसाधनों को बचाने के लिए 5 प्रभावी उपायों की सूची बनाएँ और उनका 15 दिनों तक पालन करने का अनुभव साझा करें ।

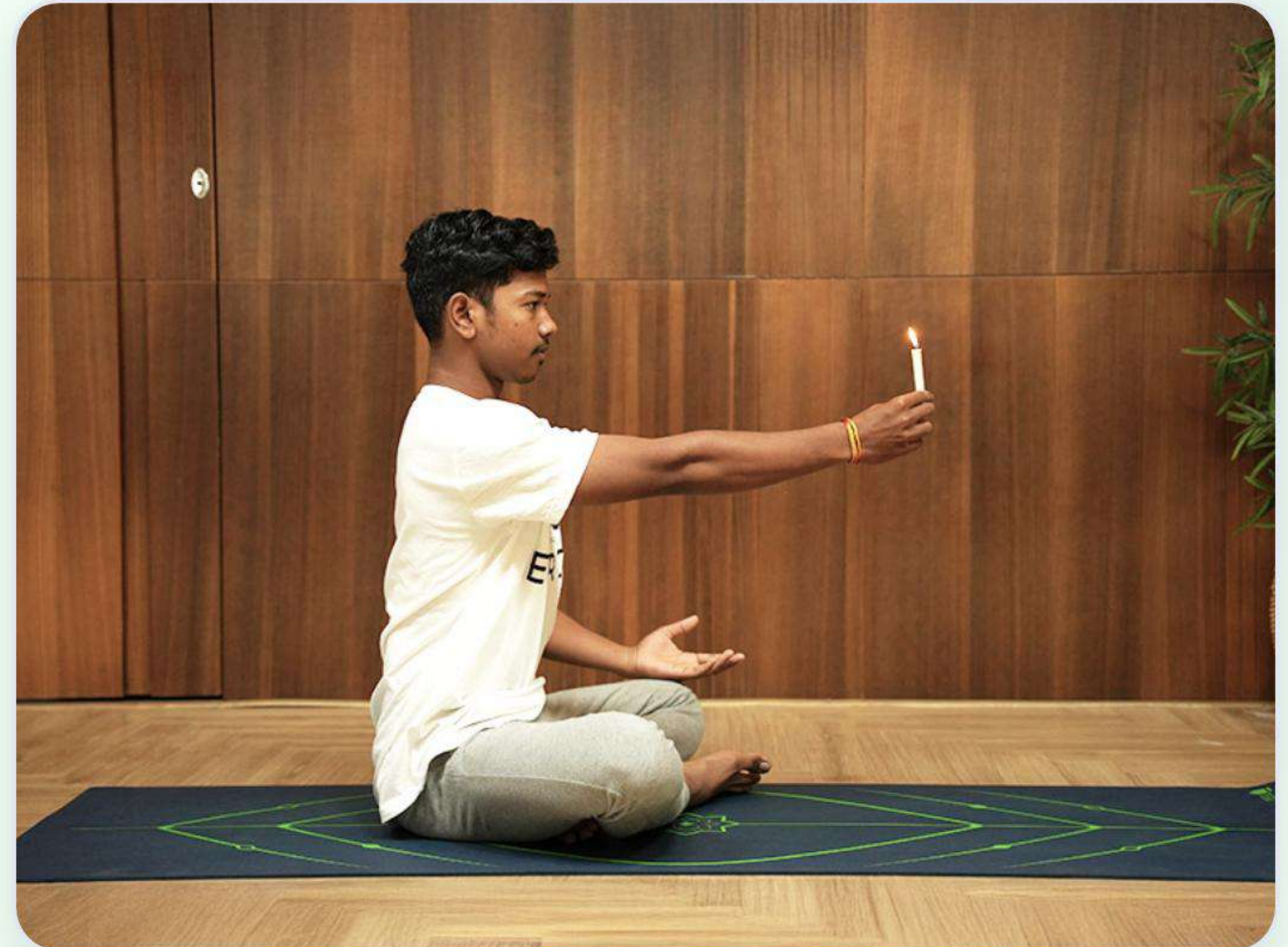
 एक जिम्मेदार नागरिक बनें ।

विशेष खंड: योग और मानसिक स्वास्थ्य

परीक्षा तनाव प्रबंधन

कक्षा 12वीं के छात्रों के लिए एकाग्रता (Concentration) अत्यंत आवश्यक है। नियमित योग अभ्यास न केवल शरीर बल्कि मस्तिष्क को भी ऊर्जावान बनाता है।

दैनिक संकल्प: "मैं प्रतिदिन 30 मिनट स्वयं के मानसिक विकास और योग के लिए समर्पित करूँगा।"



दैनिक योग क्रियाएँ (Routine)

 Yoga Chart

- 01 पद्मासन एवं ध्यान: एकाग्रता बढ़ाने हेतु (10 मिनट) ।
- 02 भ्रामरी प्राणायाम: स्मरण शक्ति और शांति हेतु (5 मिनट) ।
- 03 सूर्य नमस्कार: शारीरिक स्फूर्ति हेतु (5 चक्र) ।

योग चिंतन डायरी (Journal)

प्रतिदिन अभ्यास के पश्चात निम्नलिखित तालिका में अपने अनुभव साझा करें:

प्रतिदिन के प्रश्न	आपका अनुभव / टिप्पणी
आज अभ्यास के बाद मन की स्थिति क्या थी?	(शांत / ऊर्जावान / विचलित)
क्या योग ने आपकी पढ़ाई के फोकस में सुधार किया?	(हाँ / नहीं - विस्तार में लिखें)
आज का सबसे कठिन आसन कौन सा था?	(आसन का नाम और चुनौती)

अकादमिक स्वाध्याय (NCERT Focus)

रणनीति:

- प्रत्येक मुख्य विषय के प्रथम 3 अध्यायों के **Mind Map** तैयार करें ।
- पिछले 5 वर्षों के प्रश्नपत्रों का विश्लेषण कर मुख्य टॉपिक्स चिह्नित करें ।
- NPTEL या स्वयं (SWAYAM) पोर्टल से एक लघु कोर्स पूर्ण करें ।



| महत्वपूर्ण दिशा-निर्देश

01

प्रामाणिकता

कार्य स्वयं के द्वारा किया गया और मौलिक होना चाहिए ।

02

प्रस्तुतीकरण

डिजिटल या हस्तलिखित, दोनों ही सुंदर और स्पष्ट हों ।

03

नवाचार

विचारों में रचनात्मकता और आधुनिकता दिखनी चाहिए ।

| प्रस्तुतीकरण की समय-सीमा

जुलाई, प्रथम सप्ताह

विद्यालय पुनः खुलने पर अपने संबंधित विषय अध्यापकों को अपना कार्य जमा करें ।

File Submission

Viva Voce

सत्र 2026-27 के लिए शुभकामनाएँ!

"परिश्रम ही सफलता की एकमात्र सीढ़ी है ।"



PM Shri

पी एम श्री केंद्रीय विद्यालय करनाल (हरियाणा)

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PM SHRI KENDRIYA VIDYALAYA KARNAL

Summer Vacation Homework: Class XII (030)

Economics (2026-27)

I. General Guidelines for Students

- **Daily Record:** Homework must be done on a day-wise basis. Clearly mention the **Date and Day** at the top of each page.
- **Authentication: Parents' signature** is mandatory at the end of each day's work to ensure regular progress.
- **Safety First:** If you visit a bank, market, or office for your project, a **parent's written consent/concern** must be recorded in the notebook before the visit.
- **Presentation:** Use a scale, pencil, and colored pens for diagrams. Use highlighters to mark important definitions and keywords. Keep the work neat and legible.
- **CBSE Project Standards:** Follow the 2026-27 CBSE guidelines: 3,500-4,000 words, preferably hand-written, including a cover page, index, acknowledgments, and bibliography.

II. Chapter-wise Important Terminology

Write three definitions daily in your notebook. Focus on understanding the concept, not just the words.

Part A: Introductory Macroeconomics

Chapter 1: Introduction to Macroeconomics

- Macroeconomics
- General Equilibrium
- Partial Equilibrium
- Great Depression

Chapter 2: National Income Accounting

- Final Goods vs. Intermediate Goods
- Consumer Goods (Durable, Non-durable, Services)
- Capital Goods vs. Producer Goods
- Circular Flow of Income (Real Flow & Money Flow)
- Net Factor Income from Abroad (NFIA)
- Depreciation (Consumption of Fixed Capital)
- Gross Investment vs. Net Investment
- Stock vs. Flow
- Domestic Territory (Economic Territory)
- Normal Residents

- GDP at Market Price ($GDP_{\{MP\}}$) vs. GDP at Factor Cost ($GDP_{\{FC\}}$)
- Nominal GDP vs. Real GDP
- GDP Deflator
- Externalities (Positive & Negative)

Chapter 3: Money and Banking

- Barter System & Double Coincidence of Wants
- Money Supply (M_1, M_2, M_3, M_4)
- High Powered Money
- Legal Tender Money (Fiat & Cash)
- Central Bank
- Fractional Reserve Banking
- Money Multiplier (Credit Multiplier)
- Repo Rate & Reverse Repo Rate
- Bank Rate
- Open Market Operations (OMO)
- Cash Reserve Ratio (CRR) & Statutory Liquidity Ratio (SLR)
- Margin Requirement

Chapter 4: Determination of Income and Employment

- Aggregate Demand (AD) & Aggregate Supply (AS)
- Average Propensity to Consume (APC) & Marginal Propensity to Consume (MPC)
- Saving Function (Propensity to Save)
- APS & MPS
- Induced Investment vs. Autonomous Investment
- Investment Multiplier (k)
- Consumption Function (Propensity to Consume)
- Full Employment vs. Under-employment Equilibrium
- Involuntary Unemployment
- Ex-ante vs. Ex-post (Savings & Investment)
- Inflationary Gap (Excess Demand)
- Deflationary Gap (Deficient Demand)

Chapter 5: Government Budget and the Economy

- Government Budget
- Revenue Receipts vs. Capital Receipts
- Direct Tax vs. Indirect Tax
- Revenue Expenditure vs. Capital Expenditure
- Development vs. Non-development Expenditure
- Revenue Deficit
- Fiscal Deficit
- Primary Deficit

Chapter 6: Balance of Payments (BoP)

- Balance of Payments vs. Balance of Trade (BoT)
- Current Account vs. Capital Account
- Autonomous Items vs. Accommodating Items (Above the line/Below the line)
- Foreign Exchange Rate (Fixed, Flexible, Managed Floating)
- Appreciation vs. Depreciation
- Devaluation vs. Revaluation

- NEER (Nominal Effective Exchange Rate) & REER (Real Effective Exchange Rate)
-

Part B: Indian Economic Development

Chapter 1: Indian Economy on the Eve of Independence

- Colonial Economy
- Semi-Feudal Economy
- Stagnant Economy
- Zamindari System
- Commercialisation of Agriculture
- Drain of Wealth

Chapter 2: Indian Economy (1950–1990)

- Economic Planning
- Directive Planning vs. Comprehensive Planning
- Green Revolution
- [Maharatna & Navratna \(-Last year CBSE-2025-26\)](#)
- Land Reforms (Abolition of Intermediaries & Land Ceiling)
- Mahalanobis Model
- Import Substitution (Inward Looking Trade Strategy)
- Public Sector Undertakings (PSUs)

Chapter 3: Liberalisation, Privatisation and Globalisation (LPG)

- New Economic Policy (1991)
- Liberalisation (Deregulation)
- [World Trade Organization \(WTO\) \(-Last year CBSE-2025-26\)](#)
- Bilateral vs. Multilateral Trade
- Privatisation (Disinvestment)
- Globalisation
- Outsourcing

Chapter 4: Human Capital Formation

- Physical Capital vs. Human Capital
- [Human Development vs. Human Capital \(-Last year CBSE-2025-26\)](#)
- Skill Development
- Right to Education (RTE)

Chapter 5: Rural Development

- Rural Credit (Institutional vs. Non-institutional)
- Micro-credit & Self-Help Groups (SHGs)
- Agricultural Marketing
- Diversification (Crops & Productive Activities)
- Organic Farming

- Sustainable Development

Chapter 6: Employment

- Labour Force vs. Work Force
- Participation Rate
- Self-employed vs. Hired Workers (Casual & Regular)
- Informalisation of Workforce
- Jobless Growth

Chapter 7: Environment and Sustainable Development

- Carrying Capacity
- Absorptive Capacity
- Global Warming
- Ozone Depletion
- Opportunity Cost of Negative Environmental Impact

Chapter 8: Comparative Development Experiences

- Great Leap Forward (GLF) (-Last year CBSE-2025-26)
- Great Proletarian Cultural Revolution (-Last year CBSE-2025-26)
- Dual Pricing (-Last year CBSE-2025-26)
- Special Economic Zones (SEZ)
- Liberty Indicators- (-Last year CBSE-2025-26)

III: The CBSE Research Project (Allotment)

Objective: To complete the "Data Collection and Organization" phase of your 20-mark project. You are paired in two. Your task is to collect news clippings, interview locals, or gather secondary data for your topic.

Roll No.	Project Topic	Relation to Curriculum
1-2	MSME is Life line of Indian Economy	Indian economy development since 1950 to 1990
3-4	Central Bank vs. Inflation: Recent Repo Rate moves	Money and Banking
5-6	The Digital Rupee (e-₹): Future of Money and its impact on Indian economy	National Income
7-8	Cashless Economy: Progress of UPI in local markets	Money and Banking
9-10	Banking for All: Success of Jan Dhan Yojana	Money and Banking
11-12	GDP vs. Green GDP: Environmental impact of growth	National Income

Roll No.	Project Topic	Relation to Curriculum
13-14	The "Freebie" Culture: Impact on Govt. Budgets	Govt. Budget
15-16	Organic Farming: Economics of Sustainable Agriculture	Indian Eco. Dev.
17-18	Solar Energy, a Cost-Effective Comparison with Conventional Energy Sources	Indian Eco. Dev.
19-20	Minimum Wage Rate – Approach and Application	Indian Eco. Dev.
21-22	G-20 & India: Economic implications of the summit	Global Economy

Part 2: "Doing by Learning" & Vocational Activities

Choose **any two** activities to complete during the vacation.

1. **The "Budget Hero" (Vocational):** Assist your parents in creating a monthly household budget. Categorize expenses into 'Revenue' (food, bills) and 'Capital' (buying a gadget/asset).
2. **The Bank Visit (Observational):** Visit a local commercial bank. Observe the "Help Desk." Note down the current interest rates for Savings Accounts vs. Fixed Deposits. Ask the manager how they "create money" through loans.
3. **Newspaper Curator (Critical Thinking):** Every Sunday, find one article related to **GDP, Inflation, or RBI**. Paste it in a scrapbook and write a 5-line summary using Economics terminology (e.g., "Aggregate Demand," "Credit Control").

Part 3: Art-Integrated Project

Topic: *The Story of the Indian Rupee.*

- **Task:** Create a "Visual Timeline" or a "Comic Strip" showing the evolution of money—from the Barter system to the modern RBI-issued currency and the new e-Rupee.
- **Creativity:** Use sketches, newspaper bits, or digital collages.

Part 4: Self-Check Assessment (The "Daily 30")

Spend 30 minutes every day solving one numerical or conceptual question from your class notes.

Sample Self-Check Questions:

1. Distinguish between **Final Goods** and **Intermediate Goods** with an example of a baker.
2. If the **Legal Reserve Ratio (LRR)** is 20%, calculate the Money Multiplier.
3. Why is **GDP** not a perfect index of welfare? Give two reasons.

Part 5: Guidelines for Success

- **Consistency is Key:** Don't leave everything for Day 39. Dedicate **2 hours** a day to Economics.
- **Originality:** Your project should reflect *your* thoughts and data. Hand-written work is preferred for the project draft.
- **Enjoy the Process:** Observe the world around you. When you see a "Sale 50% Off" sign, think about how it affects **Consumer Demand!**

You can do everything if you decide to do.

Feel like an economist and behave accordingly.

Your time is your Money

PM SHRI KENDRIYA VIDYALAYA KARNAL

Summer Vacation Homework : Class VIII Social Science

Subject: Social Science (Geography, History, & Civics)

Academic Session: 2026-27

Textbook Reference: *Exploring India and Beyond* (New NCERT Curriculum)

Duration: May 8, 2026 – June 18, 2026

I. General Guidelines for Students

- The homework must be hand-written and reflect your own creativity and understanding.
- Use your new textbook *Exploring India and Beyond* as your primary reference.
- The completed assignment must be submitted on the first day the school re-opens following the summer break.

II. Project Work & Activity (Choose ONE)

Option 1: The "Resource Conservation" Portfolio

- **The Task:** Conduct a "Resource Audit" of your home. Identify three types of resources: Natural (water/land), Human-made (electricity/furniture), and Human (skills of family members).
- **Documentation:** Create a table listing these resources, their utility, and one way you can prevent their wastage.
- **Visual:** Include a "Save Energy" or "Save Water" sticker designed by you.

III. Written Assignments

Chapter 1: Resources

1. Explain why resources are distributed unequally over the earth.
2. Define **Sustainable Development**. List three principles of sustainable development that you can practice in your daily life.
3. Why are human beings considered the most important resource?

The Political Landscape

Day 1: List all 28 Indian States and their Capitals in your notebook.

Day 2: List the 8 Union Territories (UTs) and their headquarters.

Day 3: Map Skill: On a political map of India, locate and label the 28 states., **World Map Skill:** Locate and label the 5 Oceans.

Day 4: Map Skill: Locate and label the 8 Union Territories., **World Map Skill:** Locate and shade the 7 Continents on a world map.

Day 5: The "Neighbor" Task: Identify and mark the countries that share a land border with India (e.g., Nepal, Bhutan, Bangladesh)., **World Geography:** List the 7 Continents and 5 Oceans of the world.

Review: Practice filling a blank world map from memory.

History - Reshaping the Map

- ✚ Read Chapter 2: "Reshaping the Indian Political Map". Define the term "**Subadari.**"
- ✚ **Successor States:** Write 3 sentences each on the emergence of Awadh, Bengal, and Hyderabad.
- ✚ **Warrior States:** Research the Maratha Confederacy and the Sikh Kingdom under Maharaja Ranjit Singh.
- ✚ **History Map Skill:** Use the map in Chapter 2 to mark the territories of the Marathas and the Sikhs.
- ✚ **The "Company" Arrival:** Mark the three British Presidency towns: Madras, Bombay, and Calcutta.

Phase 2: Empires & Military Strategy

The Delhi Sultanate: Research why the Sultanate rose to prosperity (centralized control, trade) and why it eventually declined (weak successors, Mongol invasions, internal revolts).

Vijayanagara Empire: Write a short note on the "City of Victory." Focus on Hampi, the Vitthala Temple, and their unique Dravidian architecture.

Chapter 2 Focus: Read "Reshaping the Indian Political Map". Define the term **Subadari.**

Military Tactics (Mughals): Describe the Mughal *Manasabdari* system and their use of heavy artillery and massive infantry.

Military Tactics (Marathas): Explain **Ganimi Kava** (Guerrilla Warfare). How did they use geography (forts and hills) to their advantage?

The Comparison: Create a T-chart showing the difference between Mughal (Conventional/Heavy) and Maratha (Mobile/Guerrilla) strategies.

Day 14: Successor States: List how Bengal, Awadh, and Hyderabad became independent from the Mughals.

History Deep Dive: Important Concepts

1. Military Strategy: Mughal vs. Maratha

Feature	Mughal Strategy	Maratha Strategy
Primary Strength	-----	Highly mobile light cavalry.
Tactics	Formal, open-field battles (Conventional).	-----
Geography	Preferred plains for easy movement.	Used rugged Deccan hills and forts.
Focus	Territorial expansion and ----- --	Harassing the enemy and taxing through ---- -----

2. Write about The Vijayanagara Empire (Art & Culture)

Activity: The "Great Rulers of India" Table

Fill in the blanks using your textbook or research.

Name of Ruler	Established Capital	Year (Approx.)	Major Contribution
Qutb-ud-din Aibak	Delhi	1206	Founded the Delhi Sultanate.
Akbar	_____	1556	Introduced the Mansabdari system.
Shivaji Maharaj	Raigad	_____	Pioneered Guerrilla warfare & Naval power.

Name of Ruler	Established Capital	Year (Approx.)	Major Contribution
Krishnadevaraya	Hampi	1509	Built the Vitthala Temple; Golden Age of Art.
Maharaja Ranjit Singh	_____	1799	United the Sikh Misls into a powerful Kingdom.

Guidelines for Submission:

- Handwritten only on separate notebook.
- Submit on the day school re-opens.

P M SHRI KENDRIYA VIDYALAYA KARNAL
HOLIDAY HOMEWORK (SUMMER VACATION 2026-27)

CLASS-X
MATHEMATICS

1. Express each number as product of its prime factors.
 - a. 140
 - b. 156
 - c. 3825
 - d. 5005
 - e. 7429
2. Check whether 6^n can end with the digit 0 for any natural number n.
3. Prove that following numbers are irrational:
 - a. $\sqrt{3}$
 - b. $\sqrt{6}$
 - c. $2+\sqrt{5}$
 - d. $3-5\sqrt{7}$
4. HCF of two numbers is 113 their LCM is 56952 . If one number is 904 , then find other number.
5. Given that $\text{HCF}(306,657)=9$, find LCM (306,657).
6. If α and β are zeros of $x^2 + 5x + 8$, then find the value of
 - a. $(\alpha + \beta)$
 - b. $\alpha \times \beta$
 - c. $\frac{1}{\alpha} + \frac{1}{\beta}$
 - d. $\frac{\beta}{\alpha} + \frac{\alpha}{\beta}$
7. The sum and product of the zeros of a quadratic polynomial are given respectively. Form the quadratic polynomial:
 - a. 2 , -3
 - b. $\frac{1}{2}$, $\frac{1}{3}$
 - c. $2\sqrt{5}$, $3\sqrt{5}$
8. If zeros of a quadratic polynomial are given then form the quadratic polynomial:
 - a. -4 , -5
 - b. $\frac{2}{3}$, $\frac{1}{2}$
 - c. $2 + \sqrt{5}$, $2 - \sqrt{5}$
9. If $P(x) = 2x^2 - 3x + 5$, then find value of :
 - a. $P(-2)$
 - b. $P(0)$
 - c. $P(-\sqrt{3})$
10. Form the pair of linear equations in the following problems, and find their solutions graphically.
 - a. 10 students of class X took part in a Mathematics quiz. If the number of girls is 4 more than the number of boys, find the number of boys and girls who took part in the quiz.
 - b. 5 pencils and 7 pens together cost Rs. 50 , whereas 7 pencils and 5 pens together cost Rs. 46. Find the cost of one pencil and that of one pen.
11. On comparing the ratios $\frac{a_1}{a_2}$, $\frac{b_1}{b_2}$ and $\frac{c_1}{c_2}$, find out whether the lines representing the following pairs of linear equations at a point, are parallel or coincident-
 - a. $5x - 4y + 8 = 0$, $7x + 6y - 9 = 0$
 - b. $9x + 3y + 12 = 0$, $18x + 6y + 24 = 0$

- c. $6x - 3y + 10 = 0$, $2x - y + 9 = 0$
12. Draw the graphs of the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the axes, and shade the triangular region.
13. Solve the following pair of linear equations by the substitution method.
- $2x + 3y = 7$, $4x - y = 8$
 - $5x - 4y = 9$, $6x + 5y = 8$
14. For which values of p and q , will the following pair of linear equations have infinitely many solutions?
- $$4x + 5y = 2, (2p+7q)x + (p+8q)y = 2q - p + 1$$
15. Solve the following pair of linear equations:
- $$21x + 47y = 110, 47x + 21y = 162$$
16. Find the solution of the pair of equations
- $$\frac{x}{10} + \frac{y}{5} - 1 = 0, \frac{x}{8} + \frac{y}{6} = 15$$
17. Two years ago, Salim was thrice as old as his daughter and six years later, he will be four years older than twice her age. How old are they now?
18. Two numbers are in the ratio 5 : 6. If 8 is subtracted from each of the numbers, the ratio becomes 4:5. Find the numbers.
19. A shopkeeper gives books on rent for reading. She takes a fixed charge for the first two days, and an additional charge for each day thereafter. Latika paid Rs. 22 for a book kept for six days, while Anand paid Rs. 164 for the book kept for four days. Find the fixed charges and the charge for each extra day.
20. The sum of areas of two squares is 468m^2 . If the difference of their perimeters is 24cm, find the sides of the two squares.

HOLIDAY HOMEWORK FOR CLASS 10th
SUBJECT-ENGLISH

Instruction: Do holiday homework in separate notebook.

2. Writing Must be neat and Clean

Reading skills:

1. Read one English newspaper article every day.
2. Read any story book/ novel.

Writing Skills:

1. You are Kapil / Komal, living at C-424, Sector 18, Green Park New Delhi. You bought a washing machine from Balaji Electricals Private Limited, Lajpat Nagar, New Delhi. It started giving trouble within a few days. Write a complaint letter (100-120 words) to the Sales Manager seeking immediate repair or replacement. Invent the details of the defects.

2. You are Vaibhav, examination incharge, Goodway Public School, Aurobindo Road, Indore. You require 4 reams of white paper, 2 packets of carbon paper, one dozen registers, and blue and red ball point pens (50 each). Place an order with Sunrise Stationary Mart, 12 Mall Road, Indore mentioning terms of payment, discount asked by you and delivery date. (100-120 words)

LITERATURE:

❖ **Write answers of following questions in 120-150 words.**

1. Imagine you are Lencho. Write a diary entry expressing your feeling after receiving the money.
2. Find five values shown in the chapter and explain them briefly.
3. Conduct the small survey among the family members:
“Which emotion is more harmful- anger or hatred”?

4. 1“Freedom is a birth right. It is the most beautiful gift of god. It is valuable for all human beings as well as for creatures,” Discuss with reference to the poem “A Tiger in the Zoo.”

Project work:

1. Prepare a **poster** on the theme of “Freedom and Equity for All” (A4 size sheet)
2. Write **some lines** on a moment when nature made you happy. (A4 size sheet)
3. Prepare **Mind Map** on following Topic: (A4 size sheet)
Poem : Fire and Ice
Poem Tiger In the Zoo
4. Make your **Portfolio File**
5. **Prepare chart:**
Roll no. 1 to10 -Tense
Roll 11 to 20 – Modals
Roll 21 to 30 – Subject Verb Agreement
Roll 31 to 38 – Direct to Indirect speech

PM SHRI KENDRIYA VIDYALAYA, KARNAL

Academic Year 2026-27

CLASS – X | SUB – SCIENCE

■ SUMMER VACATION HOMEWORK ■

Task 1 – PREPARE PORTFOLIO

- Prepare your portfolio in the **given format** as instructed in class.

Task 2 – COMPLETE PRACTICAL FILE

- Complete your **Practical File** with all experiments done so far.

Task 3 – PRACTICE DIAGRAMS

- (a) ■ Human Digestive System
- (b) ■ Human Respiratory System
- (c) ■ Human Excretory System
- (d) ♥■ Heart
- (e) ■ Nephron

Task 4 – PREPARE MIND MAP

- Prepare a **Mind Map** covering the following chapters:
 - Chemical Reactions and Equations
 - Life Processes

Task 5 – NCERT EXEMPLAR PRACTICE

- Practice **Question-Answers from NCERT Exemplar** in a separate notebook for:
 - Chemical Reactions and Equations
 - Life Processes

Task 6 – READ CHAPTER

- Read the chapter on **Light – Reflection and Refraction** thoroughly.

Complete all tasks neatly and submit on time. Happy Holidays! ■

CLASS – X
HOLIDAY HOMEWORK
SUBJECT: ARTIFICIAL INTELLIGENCE

Write the answers of following questions in the Classwork notebook and learn.

1. Explain various types of intelligence in human being.
2. Write the real life examples of various domains of Artificial intelligence?
3. What is Deep Learning, and how is it used in real-world?
4. What is AI Ethics?
5. What is a AI Bias?
6. What exactly is machine learning? Include 2 examples of how machine learning is used in everyday life.
7. Explain Artificial Neural Network and its various layers.
8. What are various elements of a communication cycle?
9. What is 7 C's effective communication?
10. List the various methods of communication.
11. What is the difference between verbal and non-verbal communication? Give 3-3 examples of each type.
12. Explain the barriers of Effective Communication?
13. What is feedback in communication skills? Write its types.
14. A healthcare provider wants to improve patient care by predicting the length of hospital stays for different medical conditions. They have a dataset containing patient demographics, medical history, and treatment details. The task involves:
 - a) To predict whether a patient will have a short or long hospital stay.
 - b) To predict the number of days a patient will stay in the hospital.
 - c) To segment patients into groups with similar characteristics for personalized treatment plans.
 - d) To identify patterns in patient treatments and outcomes.

Identify the type of model (classification, regression, clustering, and association model) in the above tasks.

15. Identify the type of learning (supervised, unsupervised, reinforcement learning) and justify the following case studies most likely based on?

Case Study 1: An online learning platform wants to predict student performance in upcoming tests based on their previous quiz scores, course engagement data, and demographic information. The platform has labelled data indicating whether students passed or failed in past tests.

Case Study 2: A factory installs sensors on machines to collect data such as temperature, vibration, and noise levels. They want to detect abnormal machine behavior that could indicate a malfunction. They do not have labelled examples of failures but want to monitor anomalies in real-time.

Case Study 3: A farming organization wants to optimize irrigation by using a drone that learns to adjust water levels based on crop health, weather conditions, and soil moisture. The drone receives a reward when crop yield improves and a penalty when overwatering occurs.

Case Study 4: A retail chain wants to segment its customers based on their purchasing habits to tailor marketing campaigns. They have large amounts of transaction data but no predefined customer segments.