



**MGD GIRLS' SCHOOL, JAIPUR  
BOARD - CAMBRIDGE  
HOLIDAY HOMEWORK  
CLASS IX (2025-26)**

**Dear Students,**

As summer break begins, take this time to relax, reflect, and recharge. Alongside rest and recreation, let this be an opportunity to grow intellectually, creatively, and personally.

Your holiday homework is designed to enrich your learning beyond the classroom. Approach it with sincerity and originality. Ensure your work is neat, well-organized, and aligns with the subject-specific guidelines.

In addition, we encourage you to:

- Read newspapers to stay informed about current affairs.
- Improve handwriting by writing a page in English and Hindi daily.
- Read at least two meaningful books and create a personal word journal.
- Be proactive and responsible—support your family and community in small but meaningful ways.

"Let summer light your inner flame,  
Seek new knowledge, rise to fame.  
Pause, reflect, explore, and read—  
This season, plant your learning seed."

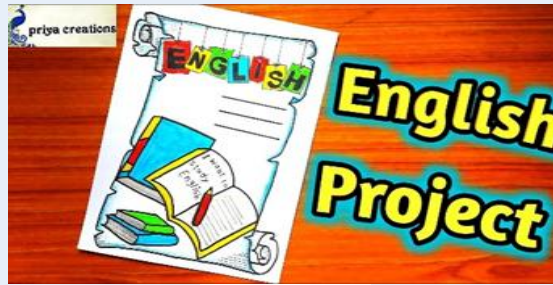
Wishing you a productive, joyful, and refreshing holiday!



# ***SUMMER HOLIDAYS ASSIGNMENT***

## **INDEX**

- 1. English**
- 2. Hindi**
- 3. Sanskrit**
- 4. French**
- 5. Mathematics**
- 6. Economics**
- 7. Global Perspective**
- 8. Science**
- 9. Computer Science**



## ENGLISH

Student-led podcast — an innovative and engaging initiative managed, hosted, and produced by students.

(Work in pairs for this project)

\*This Project is to be done over the duration of Summer Vacation, and will be submitted as a File, Audio Podcast and will be presented in the class.

### 1. Title of the Podcast:

Give your podcast a unique and catchy name (e.g., MGD Mic'd Up, Voices of MGD, The Student Scoop).

### 2. Equipment and Recording Plan:

List what basic equipment will be needed (e.g., phone, mic, quiet room, recorder etc.)

### 3. Content Overview:

What kind of content will your podcast feature? Suggested ideas include:

- Student life discussions
- Interview segments with teachers and students
- FAQs for exam tips, subject queries, etc.
- Special themed episodes (e.g., Festival Specials, Club Highlights)
- Beginner Interviews with Informal guests!
- Fun and relatable topics for students

### 4. Roles:

Mention the student roles required to run the podcast, such as:

- Host and Co-host (Optional, the hosts can take turns hosting episodes)
- Scriptwriter
- Editing

(Since this project is to be done in pairs, The students can divide the work accordingly)

### 5. Fun Elements!

Students can add some optional fun elements to their podcast to make it more attractive and entertaining! (eg. A podcast Logo, A host joint name, A fun punchline etc.)

### 6. Objective:

Write a short paragraph explaining the purpose of the podcast and what you hope to achieve through it?

Note-

- Your episode must not be longer than 5 minutes.
- Create an Audio-Only podcast of one episode.

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## HINDI



### निर्देश

1. ग्रीष्मावकाश गृहकार्य हिंदी उत्तरपुस्तिका में करें।
2. सुंदर लेख लिखें।
3. कविता, यात्रा-वृत्तांत, चार्ट एवम् कविता को चित्र तथा रंगों के प्रयोग से आकर्षक बनाने का प्रयास करें।

### ग्रीष्मावकाश गृहकार्य-

- यात्रा वृत्तान्त (अपनी किसी यात्रा का सचित्र वर्णन)
- विज्ञापन निर्माण (Use A4 Size Sheet)
- मनपसंद विषय पर कविता लेखन (स्वरचित)
- पंच परमेश्वर, बूढ़ी काकी, छोटा जादूगर, हार की जीत, गुल्ली डंडा कहानी, एवं दीपदान एकांकी पढ़ें।
- पढ़ी गई कहानियों के लेखक का नाम तथा सार कक्षा में पूछा जायेगा।
- स्वयं को RJ मानते हुए किसी भी विषय पर रेडियो प्रस्तुति तैयार करें (कक्षा प्रस्तुति हेतु)

### अथवा

- किसी एक विषय पर वाद विवाद तैयार करें – (कक्षा प्रस्तुति हेतु)

1. मीडिया स्वतन्त्र नहीं वरन राजनीति से प्रेरित है।
2. कृत्रिम बुद्धिमत्ता (AI) अभिशाप नहीं वरदान है।
3. सोशल मीडिया युवा पीढ़ी के लिए भटकाव का एक जरिया है।

## FRENCH

### Instructions :

- The students will make a booklet consisting of 4 to 5 pages to do the activity.
- The cover page should be self-designed.
- Students may use the decorative materials.
- Paste the pictures of the book/novel and the writer.
- Work should be done in French language.



## Write a review on a book or novel written by a French writer.

Students are suggested to choose a book review on any one of the following books and novels:

1. Le Petit Prince – By Antoine Saint-Exupéry
2. Le Silence de la mer – By Jean Bruller
3. Les Misérables – By Victor Hugo
4. Le Petit Nicolas – René Goscinny.
5. Le Malade Imaginaire – Molière.
6. Madame Bovary – Gustave Flaubert.
7. L'Étranger (The stranger) – By Albert Camus.

### Steps to Follow While Writing a Book Review:

(**Note:** You do not have to follow all the pointers stated below these are only suggestions to guide your writing.)

- About the Author
- About the plot
- What was the story about?
- Who were the main characters?
- What did the main characters do in the story?
- Did the main characters run into any problems?
- Did the main characters have any adventures?
- Who was your favourite character? Why?
- Did you like the book?
- What was your favourite part of the book?
- Would you recommend this book to another person?

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## MATHEMATICS

### 1. INVESTIGATION

Magic squares

In a magic square, the sum of each row, column and diagonal is the same.

a) Is this a magic square

$5x + 2y$	$7y$	$7x + 8y$
$6x + 9y$	$4x + 5y$	$2x + y$
$x + 4y$	$8x + 3y$	$3x + 8y$

b) Copy and complete this magic square

	$a$	
$a + b$	$a - b - c$	$a + c$

c) Try to make your own magic square using expressions of three terms in each box.

(Do the activity in your homework notebook)

### 2. RESEARCH

What is the point of algebra ?

"Is algebra really useful ? " Find out where algebra is used in real world applications and then prepare a presentation .

- Choose any one topic from Chapter 2 : MAKING SENSE OF ALGEBRA..
- Do research to find how this topic is useful in the real world .
- Prepare a slide (Power Point presentation) to share what you find out, include a description of the topic and how it is used and support your research with the help of real life example.

(Maximum of two slides are allowed)

## ECONOMICS

### PROJECT WORK:

Date of submission -3<sup>rd</sup> July 2025

Select any two business or industry you are familiar with ( Eg. Local bakery, construction company or textile industry)

Points for research ;

1. Analyse the factors of production.
2. How land, labour, capital and entrepreneurship is utilized in each business or industry.
3. The difference between factors of production in each case.

Make the project impressive by creativity, pictures taken and proper reference to the research work. Presentation can be in scrap book or booklet form with cover page.

## GLOBAL PERSPECTIVES



The Holiday Homework will be an Individual Report on a topic selected by the students from the Topic List give in their coursebook.

An “Issue” identified by the students concerning their topic will be the subject of their report. Each student will discuss their issue with the teacher and the approach to its research and presentation. It will have personal, local, social, national and global perspectives.

The students will be required to make their work impressive with creativity, samples pasting, pictures taken and proper references to their research work.

Word limit- 1000 words.

Paperback presentation (booklet form).

This will be a graded work.

# SCIENCE

## PHYSICS

Title: Investigating the Effect of Surface Texture on the Speed and Acceleration of a Rolling Ball

Aim: To investigate how different surface textures affect the speed and acceleration of a ball rolling down a ramp.

Research Question:

How does the texture of a surface influence the motion (speed and acceleration) of a rolling object?

Hypothesis:

Smoother surfaces will allow the ball to roll faster and accelerate more due to lower friction.

Apparatus Needed:

Ramp (same angle throughout) (You may make using books/ Planks)

Standard ball (e.g., ping pong, golf, or rubber ball)

Stopwatch or motion sensor

Measuring tape or ruler

Different surface textures (e.g., wood, sandpaper, tile, carpet, rubber mat)

Graph paper

Variables:

Independent Variable: Type of surface texture

Dependent Variables: Speed and acceleration of the ball

Controlled Variables: Ball type, ramp angle, ramp height, starting position

Method:

1. Set up the ramp at a fixed angle using a stand or books.
2. Place the first test surface on the ramp.
3. Measure a fixed distance on the ramp (e.g., 1 meter).
4. Place the ball at the top without pushing it.
5. Release the ball and start the stopwatch when it begins to move.
6. Stop timing when the ball crosses the end mark.
7. Record the time taken.
8. Repeat 3 times per surface and calculate the average time.

Use the following formulas:

Speed = Distance ÷ Time

Acceleration = (Final Speed – Initial Speed) ÷ Time

(Initial speed = 0 for rolling from rest)

9. Repeat steps 2–9 for all other surfaces.

Data Table (example)

S.No Type of surface Trial1 Trial 2 Trial3 AvgTime SPEED Acceleration

1 Wood

2 Carpet



- 3 Paper
- 4 Tile
- 5 Rubber Mat

Graph:

Plot a bar graph of:

Surface Type vs. Average Speed

Surface Type vs. Acceleration

Conclusion:

(Summarize what the results show. Did they support your hypothesis? Discuss friction and any patterns observed.)

Evaluation:

Were your results consistent?

Any sources of error?

How could you improve the experiment?

## CHEMISTRY

1. Investigate why Oobleck does not obey the usual rules when considering states of matter . Present your finding on an A 4 size sheet .
  2. Go through Science in Context C 1.01 in the text book ( Page 252) . Prepare a report based on the discussion questions.
- For both of the above , paste relevant images .

## BIOLOGY

Title: “Cell City – Build Your Own City of Life!”

Instructions:

1. Imagine a Cell as a City:

Each part of the cell (organelle) has a specific function, just like different parts of a city.

2. Create a Model/Poster/Comic/Story:

Choose one of the following formats to present your “Cell City”:

- 3D model (using cardboard, clay, or recycled materials)
- Poster or drawing
- Comic strip showing a day in the life of “Cell City”
- Short story or diary entry from the perspective of an organelle

3. Label and Explain:

Include at least 7 major organelles:

- Nucleus
- Mitochondria
- Ribosomes
- Endoplasmic Reticulum (Smooth & Rough)
- Cell membrane
- Cytoplasm
- Vacuole
- Chloroplasts if plant cell

For each organelle, write a short explanation comparing it to a part of the city. For example:

- Nucleus = City Hall (controls everything)
- Mitochondria = Power Plant (provides energy)

4. Be Creative!

Use color, names, metaphors, or fun characters. For example, Mr. Nucleus might be the mayor!



5. Evaluation Criteria:

- Creativity and originality
- Accuracy of cell-organelles and their functions
- Effort and presentation
- Clarity of explanations

students to present their projects in class as a “Guided tour “ of cell city , as if you are tour guides .

## COMPUTER SCIENCE

1. Convert these **denary** numbers to 8-bit **binary** numbers.

- a. 105      b.228      c.398      d.232      e.-54      f. -88

2. Two 8-bit binary numbers are given.

Add the **two 8-bit binary numbers** using binary addition.

- a. 00110011                      b. 11001100  
+ 01100001                      + 10111100

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3. Describe what a **low-level language** means is.

4. The **Unicode** character set is used to represent text that is typed into a computer.

a. Describe what is meant by a character set.

b. One disadvantage of using Unicode character set, instead of the **ASCII** character set, is that the text stored takes up more storage space.

Give **one reason** why it takes up more storage space.

5. Write the **truth table** of Hexadecimal number system.

6. Write the role of **MODEM** in a network connection.

7. Do the research work on different methods of developing logic of the code:

**Algorithm, pseudocode and flowcharts.**

8. Write the algorithm to compute the volume of a sphere. Use the formula:

$$V = (4/3) * \pi * r^3 \text{ Where } \pi \text{ is equal to } 3.1416 \text{ approximately.}$$

The **r** is the radius of sphere display the result.

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