

❄ WINTER ASSIGNMENT ❄
GRADE 7 → GRADE 8 BRIDGE
COURSE

G.D. GOENKA PUBLIC SCHOOL, SRINAGAR

❄ Winter-Themed Edition ❄

“Winter is the season for warm learning—grow quietly now, and bloom brightly later.”

General Instructions:

- Maintain **neat handwriting**, proper margins, and clean formatting.
- Headings must be underlined; diagrams must be well-labelled.
- Use **bullet points, tables, charts, and flowcharts** wherever required.
- Ensure every diagram/poster/map is **coloured neatly** and presented beautifully.
- Use textbooks, reference books, and reliable online sources for research.
- Do not copy-paste content—rewrite in a simplified and original manner.
- Record observations accurately in activities that require measurement, comparison, or documentation..
- You may take support from digital sources but avoid over-dependence.
- Use technology responsibly—do not copy directly.
- The Winter Assignment must be completed in a **separate notebook**.
- Submit the assignment **on the first working day after Winter Break**.

Lets Begin..

Subject English

Section A: Diary Writing

- Maintain a diary describing an account of your daily activities during the winter vacation.

Section B: Letter Writing

- Write a letter to the Head of the Local Transportation Authority suggesting improvements in public transportation safety for school-going children.
- Mention concerns such as:
 - Inadequate number of buses
 - Overcrowding
 - Lack of safety measures

Section C: Vocabulary Building

- Choose 20 words related to winter.
- Write their part of speech, meaning, and use each in a sentence.

Examples: frost, chilly, freeze.

Section D: Creative Writing – A 'No-Screens' Winter Vacation

- Describe how you would spend your vacation if you had no access to screens (mobile phones, TV, laptops, computers, etc.).

Section E: Book Review

Review the book 'Stories of Words and Phrases' by Sumanto Chattopadhyay using the format below:

- ✓ Title
- ✓ Name of the Author
- ✓ Name of the Publisher
- ✓ Year of Publication
- ✓ Genre

- ✓ Number of Pages
- ✓ Author's Background
- ✓ Synopsis (Summary)
- ✓ Critical Analysis (Strengths, Weaknesses, Writing Style)
- ✓ Conclusion
- ✓ Recommendations

Subject-Science

Section A: Measurement & Data Handling

1. Measurement Activity

- Take **10 measurements** of household objects (length, volume, weight, etc.).
- Convert each measurement into **two different units**.
- Present the data in a **table format**.

Example:

Volume of a jug \rightarrow 2 litres = 2000 mL = 2000 cm³

Section B: Physical & Chemical Changes

2. Activity & Observation

Perform **any 5 simple activities**, such as:

- Melting wax
- Dissolving salt in water
- Rusting of iron
- Burning paper
- Freezing water

For each activity:

- ✓ Write the steps
- ✓ State whether it is a **physical** or **chemical** change
- ✓ Give a **2–3 line explanation**

Section C: Microorganisms

3. Research & Observation

- Write **one full page** on:
 - Types of microorganisms
 - Their uses
 - Their harmful effects
- Observe **mold growth** on bread/fruit for 5 days.
 - Record changes daily (diagram/photo optional).

Section D: Poster Making

4. Poster – *Say NO to Plastic!*

Make a colourful poster showing:**

- Types of plastics students commonly use
- Problems caused by plastic pollution
- **Five alternatives** to plastic
- A slogan (e.g., “*Use Less, Reuse More!*”)

Section E: Metals & Non-Metals

5. Home Exploration

- List **10 items** found at home.
- Classify them as **metals** or **non-metals**.
- For each object, write **one property** explaining why the material is used.

Example:

Aluminium utensil → Good conductor of heat, lightweight.

Section F: Combustion & Flame

6. Diagram & Explanation

- Draw and label the **three zones of a candle flame**.
- Write:
 - What is combustion?
 - How do fire extinguishers work?

Section G: Conservation of Plants & Animals

7. Booklet Making

- Create a **4–5 page booklet** on:
 - Endangered species
 - Causes of extinction
 - Conservation measures
- Add a **personal pledge** to protect nature.

Section H: Cell Structure

8. 3D Model Making

- Make a 3D model of **either a plant or an animal cell**.
- Label all organelles.
- Write the **importance of the nucleus**.

Section I: Sound Around Us

9. Sound Recording Activity

- Record **five sounds** at home (clock, bell, mixer, footsteps, etc.).
- Discuss their **pitch** and **loudness**.
- Write **three ways** to reduce noise pollution.

Section J: Chemical Effects of Current

10. Conductivity Testing

- Make a simple circuit.
- Test everyday materials (coin, eraser, foil, metal key, plastic, etc.).
- Record results in a table: *Conductors vs. Insulators*.

Section K: Natural Phenomena – Winter Sky

11. Observation Activity

Observe the night sky for **3 days** and record:

- Moon phases
- Stars/constellations visible

- Any changes observed

Section L: Pollution & Environment Care

12. Report Writing

Write a **two-page report** on:

- Winter pollution
- Its causes
- Its effects on health
- Preventive steps that citizens can take

Subject-Maths

I. Read below given passage carefully

Anu is working on a Science Exhibition Project about Solar Energy. She wants to show how much electrical energy a solar panel can produce in 1 day, 1 week, and 1 month. She analyses that a single solar panel produces approximately 1.5×10^3 watt-hour of energy per day. She also learns that the power supply of a house is 2.5×10^5 joules and the energy consumption of a laptop per hour is 3×10^2 watt hours.

Based on above passage, help Anu in getting the right answers.

- How much will 7 panels produce in a day?
- How much energy will 1 solar panel produce in 7 days?
- How much energy will 10 solar panels produce in 30 days?
- If she wants to increase daily production to 6×10^3 without adding more panels, by what factor (power of 10) must he increase efficiency?
- How many laptops can run for 24 hours using 1 day's energy from 10 panels.

II. Application Based Questions

- Multiply the sum of $\frac{2}{9}$ and $\frac{-1}{5}$ by the difference of $\frac{-7}{8}$ and $\frac{-5}{12}$
- Divide the product of $\frac{49}{64}$ and $\frac{72}{21}$ by $\frac{-12}{15}$

III Real Life Application Based Questions

- A water tank contains 6500 litre of water. During transit to a nearby society, $\frac{3}{16}$ of the water was split. Find the volume of water tank that finally reached the society.
- A truck is moving at a speed of $\frac{75}{4}$ km / hr . Find the distance it will cover in $\frac{12}{15}$ hours.

IV Analysis Based Questions.

Complete the table by converting percentage into fractions.

Element	Percentage in Body	Fractions
Oxygen	65 %	
Carbon	18.5 %	
Hydrogen	9.5 %	
Nitrogen	3.2 %	
Calcium	1.5 %	
Phosphorous	1.0 %	

V Survey Based Practice

"Going Rational Guide "

Students will create a short illustrated guide and follow the instructions given below:

- Give an appropriate title to your guide.
- Create index page
- Create definition section.
- Write all relevant important concepts along with examples

- Add few mini diagrams such as flow chart, number line, formula boxes, etc.
- Use light colors to highlight definitions, rules and important points.
- Add, subtract, multiply, and divide decimals and fractions
- Finally add 5 - 7 key points to remember about rational numbers

VI Verbal Linguistics Based Questions

"Cross Word Puzzle"

1		2		3		4		5
		6						
7						8	9	
			10		11			
12	13				14			
			15	16				
17		18				19		20
				21				
22						23		

Across	Down
1. Smallest 3 digit cube	1. A palindromic square number
4. Largest square number below 200	2. 24 raised to the power 2
6 Three raised to the power 6	3. $2 \times 10^3 - 2^1$
7 Largest square number below 200	4 Biggest 3 - digit square number
8 First 3 digits of $\sqrt{179854921}$	5 $(\sqrt{2} \times \sqrt{72})^2$
10 $\sqrt[3]{5929741}$	9 Last three digits of 2^{14}
12 two to the power 10 plus 2 to the	10 A power of 2

power 7	
14 square root of 2.25 multiplied by 16 to the power 3	11 Rearrange the digits of 14^2 to form another square number
15 answer to 6 across plus ten the power 2	13 Mean of 1 across and 11 down
17 a palindromic square number	16 A 7 th power
19 a square and each digit is square	17 $10 \times 8^2 + 3^2$
21 5 raised to the power 4 plus 4 raised to the power 4	18 5 squared squared
22 $(\sqrt{905})^2$	19 $\sqrt[3]{72511713}$
23. 3 squared , cubed	20 11 down plus $\sqrt{900}$

Social Studies (History, Geography & Civics)

History

1. Comparative Study of Mughal Administration

Prepare a comparison between **Jahangir** and **Aurangzeb** focusing on:

- Administrative policies
- Religious outlook
- Military expansion
- Relationship with regional powers

Present your comparison in a **table + paragraph format**.

2. British Expansion in India – Inquiry Task

What were the *primary reasons* behind the British East India Company **expanding its control over India in the 18th century?**

Explain economic, political, and strategic motives in 8–10 lines.

3. Historical Sources – Research & Illustration

Define **historical sources** and explain **its types** (archaeological & literary).

Draw or paste **three diagrams** such as:

- Coins

- Manuscripts
- Monuments
- Inscriptions

4. Poster Activity – Decentralisation in India

Create a **poster or infographic** showing the *Evolution of Decentralisation* from British rule to the present day. Include:

- Local self-government (Lord Ripon's reforms)
- Municipalities & Panchayati Raj
- Key constitutional amendments

GEOGRAPHY

1. Map Skill – Continents of the World

On an **outline world map**:

- Colour each continent using different shades
- Create a neat **legend/key** explaining colours and symbols

2. Water Cycle & Rainfall Variation – Application Question

A town receives **heavy rainfall in June** and **almost none in July & August**. Using your understanding of the **water cycle**, explain the impact on:

- River water levels
- Groundwater recharge
- Agriculture and crop growth

Answer in **three short paragraphs**.

3. Atmosphere – Concept & Importance

Define the **Earth's atmosphere**.

Explain why its composition is essential for sustaining life, discussing:

- Oxygen & carbon dioxide
- Ozone layer
- Water vapour
- Temperature regulation

4. River Work – Diagrams Required

Explain how rivers shape Earth's surface through erosion, transportation, and deposition.
Draw **any three** landforms created by rivers:

- Meanders
- Waterfalls
- Floodplains
- Deltas

5. Poster Activity – Air Pollution & Its Impact

Create a colourful poster showing:

- **Two causes** of air pollution
 - **Two harmful effects**
 - **One measure** to reduce pollution
- Add drawings/symbols for each point.

CIVICS

1. Map Activity – Indian States

On a **political map of India**:

- Locate and label **all Indian states**
- Number them **alphabetically** for neatness

2. Democracy in School – Thinking Skills

A school makes new rules **without consulting** teachers or students.
Using democratic principles, explain in **5–6 lines** why this is unfair and undemocratic.

3. Constitution Tree – Creative Task

Imagine the **Indian Constitution** as a tree.
Create a detailed diagram showing:

- **Roots** (values)
- **Trunk** (main structure)
- **Branches** (rights, duties, directives)
- **Leaves & Fruits** (benefits to citizens)

Add a short paragraph explaining your design.

4. Value-Based Question – Equality

“Equal Rights, Equal Opportunities.”

Write a **short note** on how this slogan inspires fairness and dignity in society.

Computer Science

PYTHON PROGRAMMING ASSIGNMENT

1. Control Structures in Python

- List the various **control structures** used in Python programming.
 - Compare the logic of **conditional statements (if–elif–else)** and **iteration (loops)** in Python.
- Write your answer in clear points with examples.

2. Flowchart – Concept & Components

- Define a **flowchart**.
- Explain the major **components of a flowchart**, using correct shapes for:

- *Start / End (Terminator)*
- *Input / Output*
- *Process*
- *Decision (Yes/No)*
- *Flow lines (arrows)*

Ensure your explanation includes:

- Accurate symbols
- Proper labels
- Neat diagrams

3. Activity – Create a Flowchart (Odd/Even Program)

Draw a proper flowchart showing the logic of a Python program that:

1. Accepts a number as input
2. Checks whether the number is **odd** or **even**
3. Displays the correct output

Your flowchart must include:

- ✓ Start and End symbols
- ✓ Input symbol

- ✓ A decision block with *Yes/No* branches
- ✓ Output statement
- ✓ Correct directional arrows

4. Python Program – Voting Eligibility

Write a Python program to check whether a person is **eligible to vote** (age ≥ 18). Use proper input, condition, and message display.

5. Functions – Conceptual Understanding

Explain in your own words:

- What are *functions* in Python?
- How do functions make programming easier?
Provide **at least three benefits**.

6. Membership Operators in Python

Explain the membership operators:

- **in**
- **not in**

Give **two examples** for each operator.

7. Arrays in Python – Understanding the Concept

Answer the following:

- What are **arrays**?
- Does Python have a built-in array structure like C/Java?
- If not, which modules or data structures are commonly used in Python *instead of traditional arrays*?

Write your answer in your own words.

Subject-Urdu

اُردو سرمائی ہوم اسائنمنٹ

ہدایات :

• دیے گئے تمام کام کو غور سے مکمل کریں۔

• تحریری کام کے لیے لوز شیٹس کا استعمال کریں۔

• نام، جماعت، تاریخ اور عنوان ضرور لکھیں۔

• صاف، ستھری اور واضح لکھائی میں کام کریں۔

• تمام الفاظ کو صحیح شکل اور درست املا کے ساتھ لکھیں

• ہر دن چند منٹ کسی بھی عبارت کا مطالعہ ضرور کریں۔

• تحریر بہتر بنانے کے لیے روزانہ پانچ منٹ ضرور لکھیں۔

مطالعہ اور تفہیم (Reading & Comprehension)

• کسی کہانی یا مضمون کا مطالعہ کر کے اس کا خلاصہ ۱۰-۱۵ سطور میں لکھیں۔

• اپنی اردو کتاب یا کسی چھوٹی کہانی کا ایک صفحہ روزانہ پڑھیں اور پڑھنے کے بعد پندرہ مشکل الفاظ کے معنی لکھیں۔

• پڑھے گئے حصے کا خلاصہ ۸-۱۰ جملوں میں لکھیں۔

تحریر (Writing Skills)

۱: دیے گئے موضوعات میں سے کسی ایک پر ۱۰-۱۵ سطور کا پیرا گراف لکھیں

• استاد کا احترام / علم کی اہمیت / موسم سرما کے فائدے / میری سرمائی تعطیلات

۲: ڈائری نوٹ لکھیں ۸-۱۰ جملے

• ”میرا آج کا دن“

۳: قواعد کی مشق

• جملے لکھیں اور ہر جملے میں فعل کی قسم (ماضی، حال، مستقبل) واضح کریں۔

سماعت / سننے کی مشق (Listening Skills)

• گھر کے کسی بڑے سے کوئی پرانی یاد یا واقعہ سنیں اور تین نکات میں خلاصہ لکھیں۔

- سنی گئی بات کے دو کرداروں کی خصوصیات تحریر کریں۔
- سنی گئی معلومات کی بنیاد پر پانچ سوالات خود تیار کریں۔
- سنائی گئی کہانی یا واقعے کو اپنے الفاظ میں دوبارہ بیان کریں۔

تقریر / گفتگو (Speaking Skills)

- ۱: درج ذیل میں سے کسی ایک موضوع پر ۳-۵ منٹ کی مختصر تقریر تیار کریں
 - ایمانداری / میرا پسندیدہ کھیل / محنت کی اہمیت / صاف صفائی
- ۲- گھر میں والدین یا بہن بھائی کے سامنے روانہ انداز میں بولنے کی مشق کریں۔
- ۳- پانچ مشکل الفاظ کی درست ادائیگی بلند آواز میں کریں۔
- ۴- والدین / بھائی بہن میں سے کسی ایک کا انٹرویو لیں (کم از کم 5 سوالات تیار کریں)۔
- ۵- کسی سنی ہوئی کہانی کا زبانی خلاصہ پیش کریں۔
- ۶- گھر میں روزانہ 5 منٹ اردو گفتگو کریں۔
- ۷- کسی منظر یا تصویر کو دیکھ کر زبانی اظہار خیال کریں۔

تخلیقی تحریر (Creative Writing)

- مندرجہ ذیل میں سے کسی ایک تخلیقی سرگرمی کا انتخاب کریں
 - ۱- ”ایک سرد صبح“ پر ۱۰-۱۵ سطور کی کہانی لکھیں۔
 - ۲- موسم سرما پر چار مصرعوں کی نظم تخلیق کریں۔
 - ۳- ”مستقبل کے اپنے آپ کو خط لکھیں: ”میں پانچ سال بعد کہاں ہوں گا / گی“؟
 - ۴- ”موسم سرما کی خوشبو“ موضوع پر مختصر نظم لکھیں۔

शीतकालीन अवकाश गृहकार्य

Section A – शब्द भंडार एवं वाक्य निर्माण

प्रश्न 1. नीचे दिए गए सर्दियों से जुड़े 10 शब्दों पर प्रत्येक शब्द के दो-दो वाक्य लिखिए:

1. ठंड
2. कोहरा

3. रज़ाई
4. धूप
5. ऊन
6. गाजर का हलवा
7. स्वेटर
8. धुंध
9. कबल
10. सर्दी की छुट्टियाँ

निर्देश:

प्रत्येक शब्द के दो अलग-अलग अर्थपूर्ण वाक्य हों।

वाक्य शुद्ध एवं स्पष्ट हिन्दी में हों।

Section B — कहानी का सारांश (ईदगाह)

प्रश्न 2. लेखक: मुंशी प्रेमचंद

छात्र निम्न कार्य करें:

प्रेमचंद की कहानी “ईदगाह” पढ़कर उसका सारांश (Summary) लगभग 150-200 शब्दों में लिखिए।

सारांश में शामिल हों:

- ✓ मुख्य पात्र
- ✓ मुख्य घटनाएँ
- ✓ कहानी का विषय
- ✓ मुख्य सीख

Section C — कल्पनात्मक लेखन

प्रश्न 3. यदि आप हामिद की जगह होते तो आप कहानी को कैसे आगे बढ़ाते?

कल्पना कीजिए कि आप स्वयं हामिद हैं।

आप ईदगाह से लौटने के बाद क्या करते?

अपनी दादी अमीना के लिए क्या करते?

समाज में आप क्या बदलाव लाना चाहेंगे?

इस कहानी को आप किस दिशा में आगे बढ़ाते?

निर्देश:

उत्तर लगभग 10-12 पंक्तियों में लिखें।

भाषा मौलिक एवं अभिव्यक्तिपूर्ण होनी चाहिए।

Section C: Letter Writing

प्रश्न 4. प्रधानाचार्य/प्रधानाचार्या को शीतकालीन शिविर आयोजित करने हेतु अनुरोध पत्र लिखिए?

विषय:

प्रधानाचार्य/प्रधानाचार्या को शीतकालीन शिविर आयोजित करने हेतु अनुरोध पत्र

पत्र में शामिल हो:

शीतकालीन शिविर का उद्देश्य

विद्यार्थियों को होने वाले लाभ

गतिविधियों का सुझाव (खेल, कहानी सत्र, भाषा खेल, योग, कला इत्यादि)

विनम्र अनुरोध

उदाहरण प्रारंभ:

सेवा में,

आदरणीय प्रधानाचार्य / प्रधानाचार्या महोदय/महोदया...

Final Note

This Winter Assignment is designed to help you **revise, practise, apply, and grow**. Complete every task sincerely—your hard work today becomes your strength in Grade 8.