



DELHI PUBLIC SCHOOL GAYA

(Under the aegis of the Delhi Public School Society, New Delhi)
Affiliated to C.B.S.E, New Delhi Affiliation No.330530, School Code – 65572

WINTER VACATION ASSIGNMENT CLASS-IX (SESSION: 2024-25)

Your Winter Vacation assignment has some very interesting tasks that will make your learning session fun and engaging. So, let's start!

ENGLISH LANGUAGE AND LITERATURE (184)

Written work:

1. The Last Leaf has expressed the magnanimous sacrifice of Old Behrman. Imagine instead of being magnanimous, he behaves maniac. Write an alternate ending.
2. In the chapter, "The Beggar," by Anton Chekhov, the characters are affected by social and economic disparities. Based on your understanding interview your parents or guardians to gain their perspectives on beggars and why they think people end up in that situation.

हिन्दी (085)

1. 'मेरा छोटा सा निजी पुस्तकालय' पाठ में वर्णित पाश्चात्य रचनाकारों जैसे-विक्टर ह्यूगो, गोर्की, अलकजेंदर कुप्रिन, रेनर मारिया, स्टीफेन ज्वीग, चेखव, टालस्टाय, दास्तोवस्की मायकोवस्की और स्टीफेन स्पेंडर के विषय में जानकारी एकत्रितकर सचित्र परियोजना तैयार कीजिए।
2. हिन्दी महीनों (चैत्र से फाल्गुन) के नाम तथा प्रत्येक महीने में मनाए जाने वाले मुख्य त्योहारों की सूची तैयार कीजिए।
3. महादेव देसाई के समान गाँधी जी के जीवन में प्यारेलाल की भी महत्वपूर्ण भूमिका रही है। प्यारेलाल का जीवन परिचय पढ़कर लगभग 100 शब्दों में लिखिए।

SANSKRIT (122)

तत्, एतत्, किम्, अस्मद्, युष्मद्, गुणिन् और विद्वस् शब्दरूप लिंगों के अनुसार लिखें और याद करें।
**गृहकार्य- पुस्तिका में (Assignment copy) कार्य करें।

MATHEMATICS (041)

1. 30 circular plates, each of radius 14 cm and thickness 3cm are placed one above the another to form a cylindrical solid. Find :
 - (i) the total surface area
 - (ii) volume of the cylinder so formed.
2. The surface area of a sphere of radius 5 cm is five times the area of the curved surface of a cone of radius 4 cm. Find the height and the volume of the cone (taking $\frac{22}{7} = \pi$).

- A semi-circular sheet of metal of diameter 28cm is bent to form an open conical cup. Find the capacity of the cup.
- Following table gives the distribution of students of sections A and B of a class according to the marks obtained by them.

Section A		Section B	
Marks	Frequency	Marks	Frequency
0 - 15	5	0 - 15	3
15 - 30	12	15 - 30	16
30 - 45	28	30 - 45	25
45 - 60	30	45 - 60	27
60 - 75	35	60 - 75	40
75 - 90	13	75 - 90	10

Represent the marks of the students of both the sections on the same graph by two frequency polygons. What do you observe?

- The following table gives the frequencies of most commonly used letters *a, e, i, o, r, t, u* from a page of a book:

Letters	<i>a</i>	<i>e</i>	<i>i</i>	<i>o</i>	<i>r</i>	<i>t</i>	<i>u</i>
Frequency	75	125	80	70	80	95	75

Represent the information above by a bar graph.

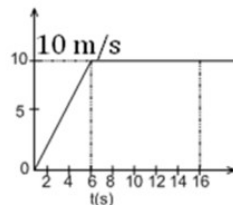
- Make a project on three dimensional shapes.

For reference click on the given link: <https://youtu.be/9RPdWbCXAI4?feature=shared>

SCIENCE (086)

PHYSICS

- Why do the driver and the person seated in front seat need a seat belt?
- A stone of 1 kg is thrown with a velocity of 20 ms^{-1} across the frozen surface of the lake and comes to rest after travelling a distance of 50 m. What is the force of friction between the stone and the ice?
- Draw the graph for uniform retardation
 - position - time graph
 - velocity - time graph
 - Acceleration- time graph
- The velocity time graph of runner is given in the graph.
 - What is the total distance covered by the runner in 16s?
 - What is the acceleration of the runner at $t = 11\text{s}$?



- A stone is dropped from the edge of a roof.
 - How long does it take to fall 4.9 m?
 - How fast does it move at the end of that fall?
 - How fast does it move at the end of 7.9 m?
 - What is its acceleration after 1s and after 2 s?

6. Which of the following has more inertia:
 - (a) a rubber ball and a stone of the same size?
 - (b) a bicycle and a train?
 - (c) a five rupees coin and a one-rupee coin?
7. A bullet travelling at 360 m/s strikes a block of soft wood. The mass of the bullet is 2.0 g. The bullet comes to rest after penetrating 10 cm into the wood.
 - (a) Find the average de-acceleration force exerted by the wood.
 - (b) Find the time taken by the bullet to come to rest.
8.
 - (a) Prove that, if the earth attracts two bodies placed at the same distance from the centre of the earth with equal force, then their masses will be the same.
 - (b) Mathematically express the acceleration due to gravity in terms of mass of the earth and radius of the earth.
 - (c) Why is G called a universal constant?
9. An object of mass 12 kg is at a certain height above the ground. If the potential energy of the object is 480 J, find the height at which the object is with respect to the ground. Given, $g = 10 \text{ m s}^{-2}$.
10. The radius of earth is 6370 km and of mars is 3400 Km. If an object weighs 200 N on earth, what will be its weight on mars. The mass of mars is 0.11 that of earth.

CHEMISTRY

1. Write any two observations which support the fact that atoms are divisible.
2. Why did Rutherford select a gold foil in his α -ray scattering experiment?
3. The atomic number of calcium and argon are 20 and 18 respectively, but the mass number of both these elements is 40. What is the name given to such a pair of elements?
4. Why do Helium, Neon and Argon have a zero valency?
5. The ratio of the radii of hydrogen atom and its nucleus is $\sim 10^5$. Assuming the atom and the nucleus to be spherical.
 - (a) What will be the ratio of their sizes?
 - (b) If atom is represented by planet earth ' R_e ' = $6.4 \times 10^6 \text{ m}$, estimate the size of the nucleus.
6. In what way is the Rutherford's atomic model different from that of Thomson's atomic model?
7. What are the postulates of Bohr's model of an atom?
8. An element X has a mass number 4 and atomic number 2. Write the valency of this element?
9. Will ^{35}Cl and ^{37}Cl have different valencies? Justify your answer.
10. Is it possible for the atom of an element to have one electron, one proton and no neutron? If so, name the element.

BIOLOGY

Complete these works in your port-folio. The topics are from the chapter "Natural Resources" as mentioned in CBSE syllabus.

1. Complete the Port-folio showing the different nutrient cycle in the ecosystem with special mention of Nitrogen cycle by microorganisms.
2. Write in your Port-folio the different techniques to mitigate the huge air pollution experienced by urban areas.
3. Construct flow diagram to show the formation of photochemical smog in urban areas with chemical equations.
4. List the chemical pesticides used in agricultural fields in India and mention their impacts on biological systems.

SOCIAL SCIENCE (087)

1. French Revolution

What were the key causes behind the outbreak of the French Revolution in 1789? How did the Revolution transform the political and social structures of France and influence Europe?

Instructions:

Diagram: Show the structure of French society before the Revolution, focusing on the Three Estates. Highlight key events such as the Storming of the Bastille and the Declaration of the Rights of Man.

2. Socialism in Europe and the Russian Revolution

Examine the causes that led to the Russian Revolution of 1917. In what ways did Lenin and the Bolsheviks reshape the socio-political landscape of Russia?

Instructions:

Include a timeline of key events during the Russian Revolution (February and October Revolutions).

Pictures: Add images of Lenin, Trotsky, and the Winter Palace to illustrate the revolution's key moments.

3. Drainage (Chapter 3)

Map Work Topics:

Locate and Label the following rivers on a map of India:

- Himalayan Rivers: Indus, Ganga, and Brahmaputra.
- Peninsular Rivers: Godavari, Krishna, Cauvery, and Narmada.
- Rivers of the Deccan Plateau: Mahanadi, Godavari, Krishna, Kaveri.
- Major Lakes in India: Wular Lake (Jammu and Kashmir), Vembanad Lake (Kerala), Sambhar Lake (Rajasthan).

Tips for Submission:

- Keep the project file well-organized, with each A4 page clearly labelled and easy to follow.
- Include captions for all pictures.
- The file should be neatly bound or placed in a project folder.

4. NOTE: **PROSPECTIVE SOCIAL SCIENCE EXHIBITION:** Prepare models and exhibit related to the following topics and share the status/progress once the school reopens after the winter vacation.

(a) The Indian Constitution:

Model: A 3D model of the Indian Parliament.

Exhibit: Display explaining the key features of the Indian Constitution and its significance in shaping India's democracy.

(b) The Role of Women in Indian Society:

Model: A timeline of important women in Indian history.

Exhibit: Display showcasing women's contributions across fields such as politics, education, and science.

(c) Indian Economy and Agriculture:

Model: A working model showing the agricultural process, from sowing to harvesting.

Exhibit: A display of different crops grown in India and their economic significance

COMPUTER APPLICATIONS (165)

Create a presentation file in MS PowerPoint for the topic Cyber safety.

Instructions to be followed:

1. 5 slides should be there, including the title slide.
2. In the slide, you have to add the DPS Gaya logo with the name.
 - (a) The title should be Cyber Safety.
 - (b) In the subtitle area, add "Presented by - your name, class, section, Roll number."
3. At the header section insert logo of DPS Gaya or write Delhi Public School Gaya.
4. In footer section you have to add your name and page no.
5. Insert at least one image related to the topic of that slide.
6. Add one image as a watermark on all slides.

