1). **Reading project:** Read the novel in your course *‘Three men in a boat’* by Jerome K. Jerome, thoroughly. (Focus upon the various character sketches and humorous incidents).

2). **Designing a Poster:** Design a poster on *Waste Management*. Derive ideas from newspapers, magazines, internet and your english Main Coursebook. Make it colourful and attractive using the *‘Recycle Symbol’* and apt and motivating slogans.

3). **Following is the list of books that are recommended for reading during vacations**
   a). *‘Wuthering Heights’* - Emily Bronte  
   b). *‘Mayor of Castorbridge’* - Thomas Hardy  
   c). *‘Oliver Twist’* - Charles Dickens  
   d). *‘Tom Sawyer’* - Mark Twain  
   e). *‘The Adventures of Huckleberry Finn’* - Mark Twain  
   f). *‘Gulliver’s Travels’* - Jonathan Swift

4). Write a speech on effective management of waste incorporating the three R's of Waste Management- Reduce, Reuse and Recycle, in about 150 words to be delivered in the morning assembly.

5). Make a list of organisations in your country that are involved in managing waste and write about atleast one of them.

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**SUBJECT-SCIENCE**  
*Class-IX*

**Subject : PHYSICS**

Q1. Make a project on any two of the following scientists:-

 a) Albert Einstein  
 b) J.J. Thomson  
 c) Robin Warren  
 d) Carolus Linnaeus.

<table>
<thead>
<tr>
<th>The project should be under the following heads:-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Guidelines for the project:-</strong></td>
</tr>
<tr>
<td>a)Life and time of the scientist</td>
</tr>
</tbody>
</table>
b) His education

Paste photographs or pictures related to the topic

c) His contribution to science

Use coloured A4 sheets.

d) His laurels and achievements.

Submit the sheets in a folder marked with the name of the scientist.

e) How has he/she inspired you.

( Project should be of 7-8 pages)

Q2. (Group Activity)- Five students should be in one group

Make any project / chart on 'Waste Management'.

You can take any topic from:

- Biodegradable wastes
- Energy from waste
- Radioactive or Nuclear waste
- Waste water management
- Kitchen waste,

- E-waste
- Bricks from flyash
- Cement from rice husk
- Biodiversity park
- Recycled paper

Q3. Attempt the following numericals in your class notebook.

1. A car starts from rest and accelerates uniformly over a time of 5.21 seconds for a distance of 110 m. Determine the acceleration of the car.

2. A race car accelerates uniformly from 18.5 m/s to 46.1 m/s in 2.47 seconds. Determine the acceleration of the car and the distance traveled.

3. A feather is dropped on the moon from a height of 1.40 meters. The acceleration of gravity on the moon is 1.67 m/s². Determine the time for the feather to fall to the surface of the moon.

4. A bike accelerates uniformly from rest to a speed of 7.10 m/s over a distance of 35.4 m. Determine the acceleration of the bike.

5. A car traveling at 22.4 m/s skids to a stop in 2.55 s. Determine the skidding distance of the car (assume uniform acceleration).

6. A bullet leaves a rifle with a muzzle velocity of 521 m/s. While accelerating through the barrel of the rifle, the bullet moves a distance of 0.840 m. Determine the acceleration of the bullet (assume a uniform acceleration).

7. A bullet is moving at a speed of 367 m/s when it embeds into a lump of moist clay. The bullet
penetrates for a distance of 0.0621 m. Determine the acceleration of the bullet while moving into the clay. (Assume a uniform acceleration.)

8. A stone is dropped into a deep well and is heard to hit the water 3.41 s after being dropped. Determine the depth of the well.

9. It was once recorded that a Jaguar left skid marks that were 290 m in length. Assuming that the Jaguar skidded to a stop with a constant acceleration of \(-3.90 \text{ m/s}^2\), determine the speed of the Jaguar before it began to skid.

10. A plane has a takeoff speed of 88.3 m/s and requires 1365 m to reach that speed. Determine the acceleration of the plane and the time required to reach this speed.

1. \(a = 8.10 \text{ m/s}^2\)
2. \(a = 11.2 \text{ m/s}^2, d = 79.8 \text{ m}\)
3. \(t = 1.29 \text{ s}\)
4. \(d = 400 \text{ m}\)
5. 
6. \(v_i = 5.03 \text{ m/s}\)
7. \(v_i = 30.6 \text{ m/s}, d = 47.9 \text{ m}\)
8. \(t = 8.69 \text{ s}\)
9. \(a = -1.08 \times 10^6 \text{ m/s}^2\)
10. \(d = -57.0 \text{ m}\)

Subject: CHEMISTRY

Very Short Answer Type Questions:

1. Which of the following substances is the most compressible?
   Air, Ethyl alcohol, Sodium Chloride

2. Which energy is possessed by particles of matter due to their random motion?

3. Which will have more effect on kinetic energy: Doubling the mass or doubling the velocity?

4. Boiling point of water is 100 degree centigrate at atmospheric pressure. Will it increase, decrease or remain same with increase in temperature?

5. What is the term used for change of solid state to liquid state?

6. How does the rate of diffusion change with temperature?

7. At 0 degree, when heat is given to ice, temperature remains constant till whole of the ice melts. What is this heat called that disappears?

8. Name the term used for solid directly formed from the gas?
9. How does the amount of liquid influence its evaporation?

10. The boiling point of ethyl alcohol is 80 degree centigrade. Express it in kelvin scale.

**Short Answer Type question:**

1. Separate the following substances into two groups based on intermolecular forces of attraction:
   
   Ice, Camphor vapour, Salt, Plastic, Carbon dioxide, Oxygen

2. Three materials A, B and C are taken separately in a can, bottle and a jar. The volume of C depends on the size of the container but the shape of both B and C depends on the container. The volume of A and B is independent of the kind of container. Explain which of these is solid, liquid or gas.

3. How are particles of matter affected with increasing or reducing pressure on the matter at a given temperature?

4. How does evaporation cause cooling of a container having a liquid?

5. How do you account for the appearance of water droplets on the outer surface of ice cold water bottle?


7. Why dry ice is stored under high pressure?

8. Why do Naphthalene balls disappear with time without leaving any solid?

9. Solids are incompressible. Suggest a solid which can be compressed though temporarily.

10. Coconut oil freezes in winter but mustard oil does not do so at atmospheric pressure. What could be state of these liquids at reduced pressure?

**Subject : BIOLOGY**

**ANSWER THE FOLLOWING QUESTIONS NEATLY:-**

Q1. Is the plant cell wall living or dead?
Q2. What is the chemical composition of cell wall in plants.

Q3. Write 2 main differences between the following:-

   (a) Plant cells and animal cell
   (b) prokaryotic and eukaryotic
   (c) cell wall and cell membrane
   (d) osmosis and diffusion

Q4. "Nucleus is known as the brain of the cell". Why?

Q5. What does the term Plasmolysed mean when used to describe a cell?
Q6. Define the following terms: Protoplasm, Cytoplasm, Nucleoplasm

Q7. Differentiate between RER and SER.

Q8. Why is plasma membrane called selectively permeable membrane.

Q9. Explain the following:
   (a) Hypertonic solution
   (b) Hypotonic solution
   (c) Isotonic solution

CLASS – IX
FRENCH

1. Ecrivez une histoire d’un livre ou d’un film.
3. Copiez quelques chansons d’un chanteur/d’une chanteuse que vous aimez bien.

4. Dear students,

With increasing population and rapid development, waste in different forms has assumed serious dimensions. Both rich and poor countries are facing this problem. It is adversely affecting both human health and health of the natural environment. With more prosperity the magnitude of waste is certainly going to magnify. Therefore there is an urgent need for framing sustainable waste management policies and programmes. In framing these policies all concerned, both waste generators and the people who get affected by waste have to play an important role. In addition to government policies different sections of the society have to bear their share of responsibility in devising and implementing waste management policies. Educational institutions like our school obviously have to play a critical role in resuming, recycling and disposal of waste. We have to convert waste into a resource. There are number of examples where beside government, schools have played central role in popularizing waste management policies. Our school has always been in the forefront of social and educational movements designed to improve the human health and reduce the impact of development on environment. Our students in particular have always actively participated in educating society at large by setting examples of high standards. It is in continuation with this tradition and social commitment that we have chosen to assign our students to undertake the assignments on WASTE MANAGEMENT and evolve different methods of managing the waste. Out of various sub-components of this assignment you have to work on the following topic(s):

- Propose and elaborate through charts a few models / methods of reuse, recycle and disposal of waste.

CLASS – IX
SOCIAL SCIENCE

Project on electoral Politics:-

2. Highlight the following aspects of India’s general elections.
3. Paste a map of India and show the state-wise Lok Sabha seats where elections are held.
4. Mention the number of seats won by various political parties.
5. Write about the formation of the 16th Lok Sabha, name its speaker, leader of the majority party, and the leader of the opposition.
6. Name the new Prime minister and his / her cabinet.

Guidelines:- It should be done in the Pol Sc. Notebook and of 5 to 6 six pages. The material information should be gathered from daily newspapers and periodicals. Cut and paste relevant articles/pictures to make it interesting and informative.

CLASS – IX
MATHEMATICS

I. Prepare a project of the following topic using waste material
   a. Coordinate geometry- Cartesian plane
      - 4 quadrants
      - Ordinate and abscissa
   b. All the identities used to factorise polynomials(braino using waste material)
   c. All the 3- dimensional figures-curved surface area
      a. total surface area
      b. volume
      c. combination of figures
   d. Herons formula

Chapter 1
Q1. Locate √13 on the number line.
Q2. Express 0.235 and 0.67 in the p/q form where p and q are integers and q= 0
Q3 Simplify \((25)^{3/2} \times (243)^{3/5}
\)
\((16)^{5/4} \times (8)^{4/3}\)
Q4. Represent √9.3 on the number line. Write Steps of construction.
Q5.Find two rational numbers and two irrational numbers between 5/7 and9/11
Q6. Simplify (i) \((5+\sqrt{7})(2+\sqrt{5})\)
    (ii) \((\sqrt{5} +\sqrt{7}) + (\sqrt{7} -\sqrt{5})\)
Q7. Rationalize the denominator \(\frac{1}{7+3\sqrt{2}}\) \(\frac{1}{2 \sqrt{5}-\sqrt{3}}\)
Q8 Find which of the variable represents a rationalor irrational numbers
   \(w^3 =27\)
   \(y^2 =17/4\)
   \(x^2 =5\)
Q9 Rationalise the denominator and simplify
   \(\frac{3\sqrt{2} - 4\sqrt{3}}{\sqrt{3}+\sqrt{6}} + \frac{\sqrt{6}}{\sqrt{6}+\sqrt{2}}\)
Q10.Give an example of each of two irrational numbers, whose
   (i) Sum is an irrational number
   (ii) Quotient is a irrational number
   (iii) Difference is rational number
   (iv) Product is a rational number

Chapter 2
Q1.Find p(0),p(1),p(2) of the polynomials
   i. \(p(x) =4x^2+x-5\)
   ii. \(p(x) = (x-1)(x+1)\)
   iii. \(p(t) = t^3 + t +1\)
Q2. Divide
   a. $2x^3 - x^2 - 2x - 7$ by $x - 2$
   b. $3y^4 - 8y^3 - y^2 - 5y - 5$ by $y - 3$

Q3. In each of the following, use remainder theorem to find the remainder when $f(x)$ is divided by $g(x)$
   a. $f(x) = 4x^4 - 3x^3 - 2x^2 + x - 7$; $g(x) = x - 1$
   b. $f(x) = 4x^3 - 12x^2 + 11x - 3$; $g(x) = x + 1/2$
   c. $f(x) = 9x^3 - 3x^2 + x - 5$; $g(x) = 3x - 2$

Q4. Factorise:
   i. $x^6 - y^6$
   ii. $p^3(q - r)^3 + q^3(r - p)^3 + r^3(p - q)^3$
   iii. $x^3 - 6x^2 + 11x - 6$
   iv. $49x^4 - 168x^2y^2 + 144y^2$
   v. $x^2 - 4\sqrt{2}x + 6$

Q5. Find the value of $a$ if $x + a$ is a factor of $x^3 + ax^2 - 2x + a + 4$

In addition to this all the exercises from R. S. Aggarwal (chap 1 & chap 2)

CLASS – IX
COMPUTER SCIENCE

Each year, thousands of tons of old computers, mobile phones, batteries, cables, old cameras and other e-waste are dumped in landfill or burned. Thousands more are shipped, illegally, from Europe, the UK and the USA to India and other developing countries for ‘recycling’. Some is sent as scrap, some as charity donations.

We have innovative ideas for using E-waste (like Wires, Mobiles, CDs, Computers and other accessories) as shown in the picture given below and make an innovative product using E-waste

OR

Make a project in the form of Powerpoint presentation/movie depicting the following issues related to E-Waste in India.

. Environmental impacts of Electronic Waste
. Various harmful substances used in electronic items.
. Techniques of E-waste management

You can E-mail your work at the following e-mail address mentioning your name and class.

sapjcomputer@gmail.com (for classes IX A,B,C)

napjcomputer@gmail.com (for class IX D)
1. भारत की रचनाओं का संकलन करके उनके नाम लिखिए — ( मोराराज, तुलसीदास, रेशमा, ललित भारती और उसका श्रमणी)

2. 'दुर्गा अभिलाषा' कहानी में पीरसाने किन स्थितियों में अवधारणा अद्यतन है? होरकाल में कहानी के माध्यम से समाज की किस दृष्टि से और संबंधित किया है?

3. नीति संबंधी योजना कैसे बनाई जाएँगी तथा उन्नति पर सुधार अभियान में लिखिए।

श्रीमान काजल के प्रिय दर्शकों — विषय वर्णित और विषय सम्बन्धित

1. अवधारणा - पुस्तिका के प्राप्त तीन अध्यायों के प्रश्नों के उत्तर पेंसिल से पुस्तिका में ही लिखिए।

2. परम्पराएं - धारावाहिक के वर्णों और वर्णों में तृप्त भाव लिखिए।

3. अनुदान तथा सर्वनाम बाबु के रूप में भाव लिखिए।