



Delhi Public School JHANSI

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Holiday Homework

Class - X (2022-23)

***Note for Students*:** Summer Holidays are a well deserved opportunity to relax and rewind by indulging in activities that are pleasurable at the same time educative. We would like to thank all of you for making online classes and virtual Assessment a success. It's a sincere request to all to complete holiday projects and home assignments on time. Engage yourself wholeheartedly as you will learn a lot through it. Practice your hobbies or inculcate new hobbies. Please ensure that you complete the assignment neatly.

***Note for Parents*:** Summer Holidays Homework is an initiative on our part, to inculcate innovativeness, creativity and interest in the tasks assigned to our students. It will not only enable them to recapitulate what was taught but will also help them to connect themselves to the various learning processes.

ENGLISH:

Write down the following essays in about 300 to 350 words in your language note book:-

- 1) A cricket match.
- 2) If I were the prime minister of India.
- 3) The person I Admir -Mother teresa.
- 4) Complete black out-A day before examination.
- 5) Craze of western culture.

हिंदी:



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निबंध लेखन- निम्नलिखित विषयों पर संक्षिप्त निबंध दिए गए संकेत बिंदु के आधार पर हिंदी कॉपी में लिखिए।

1-खेल और स्वास्थ्य: भूमिका, खेल कूद का महत्व, खेल कूद के लाभ, उपसंहार

2-ग्लोबल वॉर्मिंग: भूमिका, दुष्परिणाम, ग्लोबल वॉर्मिंग के कारण, बचाव एवं उपसंहार

क्षितिज- पाठ-2 बालगोबिन भगत पढ़िए तथा प्रश्नों के उत्तर छांटिए।

कृतिका- पाठ-3 साना साना हाथ जोड़ि पढ़िए तथा प्रश्नों के उत्तर छांटिए

SOCIAL STUDIES:

Topic:

Consumer Awareness

OR

Social Issues

OR

Sustainable Development

Objectives:

a)The overall objective of the project work is to help students gain an insight and pragmatic understanding of the theme and see all the Social Science disciplines from interdisciplinary perspective. It should also help in enhancing the Life Skills of the students.

Students are expected to apply the Social Science concepts that they have learnt over the years in order to prepare the project report.

Instructions:



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A. Make a milky file and compile all the topics related to the project in it.

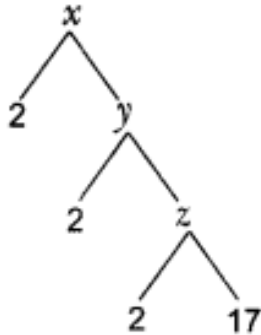
B. Integrate various ways of art in the project work.

C. It is to be noted here by all students that the projects and models prepared should be made from eco-friendly products without incurring too much expenditure.

8. The Project Report should be handwritten.

MATHEMATICS :

1. If HCF of a and b is 12 and product of these numbers is 1800. Then what is LCM of these numbers?
2. What is the HCF of $3^3 \times 5$ and $3^2 \times 5^2$?
3. Two positive integers p and q can be expressed as $p = ab^2$ and $q = a^2b$, a and b are prime numbers. What is the LCM of p and q ?
4. Explain why $3 \times 5 \times 7 + 7$ is a composite number.
5. What is the least number that is divisible by all the numbers from 1 to 10?
6. Find the LCM and HCF of 12, 15 and 21 by applying the prime factorisation method.
7. Find the LCM and HCF of the following pairs of integers and verify that $\text{LCM} \times \text{HCF} = \text{product of the two numbers}$.
(1) 26 and 91 (ii) 198 and 144
8. There is a circular path around a sports field. Sonia takes 18 minutes to drive one round of the field, while Ravi takes 12 minutes for the same. Suppose they both start from the same point and at the same time, and go in the same direction. After how many minutes will they meet again at the starting point?
9. Write down the decimal expansions of the following numbers:
(i) $35/50$ (ii) $15/1600$ (iii) $717/8000$ (iv) $213/3125$
10. Find the value of x , y and z in the given factor tree. Can the value of 'x' be found without finding the value of 'y' and 'z'? If yes, explain.



- 11.
12. If the sum of zeroes of the quadratic polynomial $3x^2 - kx + 6$ is 3, then find the value of k .
13. If the sum of the zeroes of the polynomial $p(x) = (k^2 - 14)x^2 - 2x - 12$ is 1, then find the value of k .
14. If α and β are the zeroes of a polynomial such that $\alpha + \beta = -6$ and $\alpha\beta = 5$, then find the polynomial.
15. Find the condition that zeroes of polynomial $p(x) = ax^2 + bx + c$ are reciprocal of each other.
16. Form a quadratic polynomial whose zeroes are $3 + \sqrt{2}$ and $3 - \sqrt{2}$.
17. Find a quadratic polynomial, the sum and product of whose zeroes are $\sqrt{3}$ and $1/\sqrt{3}$.
18. If the zeroes of the polynomial $x^2 + px + q$ are double in value to the zeroes of $2x^2 - 5x - 3$, find the value of p and q .
19. Can $(x - 2)$ be the remainder on division of a polynomial $p(x)$ by $(2x + 3)$? Justify your answer.
20. Find the quadratic polynomial whose zeroes are -2 and -5 . Verify the relationship between zeroes and coefficients of the polynomial.
21. Find the zeroes of $p(x) = 2x^2 - x - 6$ and verify the relationship of zeroes with these coefficients.
22. Verify whether 2 , 3 and $\frac{1}{2}$ are the zeroes of the polynomial $p(x) = 2x^3 - 11x^2 + 17x - 6$.
23. Show that $\frac{1}{2}$ and $-\frac{3}{2}$ are the zeroes of the polynomial $4x^2 + 4x - 3$ and verify the relationship between zeroes and coefficients of polynomial.
24. Find the zeroes of the quadratic polynomial $f(x) = x^2 - 3x - 28$ and verify the relationship between the zeroes and the coefficients of the polynomial.
25. If α and β are the zeroes of the polynomial $6y^2 - 7y + 2$, find a quadratic polynomial whose zeroes are $1/\alpha$ and $1/\beta$.



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SCIENCE:

BIOLOGY:

Make project on Natural Resources and waste management.

PHYSICS:

Task 1: Assigned to Roll numbers: 1 to 5

Theme: Plastic Pollution is created when plastic has gathered in an area and has begun to negatively impact the natural environment and create problems for plants, wildlife, and even the human population.

You need to do research on the 7 major types of plastic responsible for causing Plastic pollution. What are the 7 types of plastic codes and how are they used? Compile the information in the form of a Power Point Presentation of 8-10 slides.

Web source: <https://www.greensutra.in/news/plastic-recycling-codes/>

Task 2: Assigned to Roll numbers 6 to 10.

Theme: Ahana was reading an article in an environmental magazine about the impact of COVID-19 on the rise in plastic pollution. Ahana started wondering if plastic is playing the role of a protector or a polluter with the increased use of gloves, face masks and PPE kits becoming imperative to safeguard oneself against Corona virus. She later, discussed the information gathered with her friends.

Make a colourful Comic strip depicting the exchange of dialogue between Ahana and her friends. The comic strip should clearly represent the impact of Corona virus on single use plastic and increase in the levels of plastic pollution.

The Comic strip can be made using A4 sheet /PowerPoint Presentation.

Web Source: <https://www.weforum.org/agenda/2020/05/plastic-pollution-waste-pandemic-covid19-coronavirus-recyclingsustainability/>



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<https://www.euronews.com/2020/05/12/will-plastic-pollution-get-worse-after-the-covid-19-pandemic>

Task 3: Assigned to Roll numbers 11 to 15.

Theme: Research on the guidelines issued by Central Pollution Control Board (CPCB) to dispose the bio medical plastic waste like goggles, PPE kits, face shield from the affected areas. Compile the information in the form of a Report of 5-7 pages.

Report can be made using MS Word or A4 size sheets.

Web Source: <https://india.mongabay.com/2020/03/pollution-watchdog-releases-guidelines-to-handle-covid-19-biomedicalwaste/>

<https://www.thehindu.com/news/national/guidelines-issued-for-handling-of-waste-generated-during-covid-19-patientstreatment/article31393724.ece>

Task 4: Assigned to Roll numbers 16 to 20.

Theme: Sikkim, in 1998, became the first Indian state to ban disposable plastic bags. Sikkim is also among the first to target single use plastic bottles. You are advised to do “research” on steps taken by Sikkim government in reducing the plastic pollution in India.

Depict the same creatively in the form of a short video with the title-‘Sikkim as the winner of battle against Plastic’.

Video can be made by using any free online software like moviemaker.

Web Source: <https://www.unenvironment.org/news-and-stories/story/how-indian-state-sikkim-working-end-plasticpollution>

Task 5: Assigned to Roll numbers 21 and onwards.

Theme: You are advised to do research on safe and sustainable options in place of single use plastic which can help in minimizing the amount of plastic pollution so that we do not create plastic waste beyond a permissible level and make our contribution in safe guarding ourselves against COVID-19 and also use plastic wisely.



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Depict your suggestion to the society in the form a Poster.

Poster can be made on computer (using software like Canava or Power Point) or can be made on an A4/A3 size sheet.

Poster should consist of innovative solutions/steps taken up the Sikkim government and a slogan highlighting:

“The solutions to reduce plastic waste should be practiced and supported by every Indian to support the theme- Ek Bharat, Shrestha Bharat.”

Web Source: <https://www.greenqueen.com.hk/indian-town-lachen-launches-bamboo-bottles-for-tourists-to-fight-plasticwaste/>

CHEMISTRY:

1. Identify any ten chemical reactions taking place around you and try to write the corresponding balanced chemical equations yourself in your notebook.
2. Make a table for the nature of the various samples like milk, Soap water mixture, common salt solution, lemon juice, tap water .baking soda solution etc by using natural indicators like red cabbage juice ,turmeric etc. (Note: Surf the internet to learn how to make natural indicators at home)
3. Make mind maps for ch 1 and ch 2 in your notebooks.
4. Why does an aqueous solution of alcohol fail to conduct electricity?
5. Which of these will have higher concentration of H^+ ions? 1M HCl. or 1M CH_3COOH
6. How is chloride of lime different from Calcium Chloride?
7. Does Tartaric acid help in making cake or bread fluffy? Explain.
8. Dry ammonia gas has no action on litmus paper but a solution of ammonia in water turns red litmus paper blue. Why is it so? 9. A chemical compound having the smell of chlorine is used to remove yellowishness of clothes in laundries. Name the compound and write down its preparation.
10. A knife which is used to cut a fruit was immediately dipped in water containing few drops of blue litmus solution. If the colour of the solution changes to red, what inference could be drawn about the nature of the fruit?
11. Why are some salts known as hydrated salts?
12. What is tooth enamel chemically? State the conditions when it starts corroding.



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13. A dry pellet of a common base B when kept open absorbs moisture and turns sticky. The compound is also prepared by Chlor Alkali process. Identify B. What happens when B reacts with hydrochloric acid?
14. What happens when egg shell is placed in concentrated nitric acid in a beaker?
15. If at home your mother uses baking soda for making cake.
- (a) how will it affect the taste of cake and why? what is the role of tartaric acid added to baking soda
- (b) how can baking soda be converted into baking powder?
- (c) what is the role of tartaric acid added to baking soda?
16. What is the colour of litmus in a solution of Ammonium hydroxide?
17. Two solutions A and B have p H values of 5 and 8 respectively. Which solution will be basic in nature?
18. What is observed when SO₂ is passed through (a) water(b) lime water Also write chemical equations for the reactions that take place.
19. What is baking powder? How does it make the cake soft and spongy?
20. A calcium compound which is yellowish white powder is used as a disinfectant and also in textile industry. Name the compound. Which gas is released when this compound is left exposed to air?
21. Name the gas that is liberated when a dilute acid reacts with a metal .What happens when a burning candle is brought near the gas?
22. A compound which is prepared from gypsum has the property of hardening when mixed with a proper quantity of water. Identify the compound. Write the chemical equation for its preparation. For what purpose Is it used in hospitals?
23. Why should water be never added dropwise to concentrated Sulphuric acid?
24. Name the products formed in each case-
- (a) hydrochloric acid reacts with caustic soda.
- (b) Granulated Zinc reacts with caustic soda.
- (c) carbon dioxide is passed into lime water.
25. Why does hydrogen chloride gas not show acidic behavior?
26. What is meant by water of crystallization? Describe an activity to show that blue COPPER Sulphate crystals contain water of crystallization.
27. Learn all the symbols and valencies of acidic and basic radicals.
- 28 Make PPT on any topic from chapter 1 and like Concept of corrosion, conditions require and methods to prevent it.

Concept of pH & scale and importance in everyday life Chemistry



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COMPUTER:

Make a HTML webpage on the topic “Introducing Internet” Please note that it is compulsory that this webpage must have at least 3 lists and must be of at least 3 pages and all the tags taught in class must be used in this project work.

Kindly save it on a Pen drive and submit such pen drive with a marking on it. Pen drives shall be returned as soon as work is saved.