



Kendriya Vidyalaya NHP, Gerukamukh
Holiday Homework (Summer Vacation)
Class: IX



Sub- English

Objectives:

- A. enhancing writing and thinking skills among the students
- B. inculcating observing capacity among the students.
- C. sensitizing them towards nature.
- D. developing the feeling of self-awareness.

1. Write an essay on 'My Letter to The World in 2030'
2. The choice is very difficult. If you encounter such condition that compels you to choose one out of many, what thing you keep in your mind while making a decision.
3. You are the most important being in the world. But you don't understand the significance of your life. Write a paragraph on highlighting the importance of self.

Project work:

Nowadays use of digital devices has increased and digital services have made our cash transactions easier and smoother. Government of India has taken initiatives to digitalize cash transactions to buy things and pay bills. Following are some of the digital initiatives to make people use digital services.



Take up a project in groups of four /(as per your convenience) to collect opinions of people on the use of digital services in their daily life. Develop an opinionnaire to collect opinions of about forty people in your neighbourhood. Collect the opinions, tabulate the ideas and write a report about the use of digital devices. Once the project is completed, the group has to present it to the whole class in soft copy. Charts may be created and displayed on the notice board after the school gets reopened.

It must be completed in A4 size paper.

Note:

- A. Answers must be written in the notebook.
- B. No words limit for the answers.
- C. All the questions are compulsory.

Hindi

प्रश्न 1 सभी प्रश्नों के उत्तर 2-2 बार लिखिए ।

(क) उपसर्ग उपसर्ग किसे कहते हैं 3 उदाहरण लिखो ?

(ख) प्रत्यय किसे कहते हैं 3 उदाहरण लिखो ?

(ग) उपसर्ग से 5-5 शब्द बनाईये ।

अति-,अधि-,अभि-,अव-,आ-,उप-,दूर, नि-,परा,परि, प्रति, वि सम्,

(घ) प्रत्यय से 5-5 शब्द बनाईये

कर ,आहाट,आनी, आइन, आयत, ई, ईय, इया, अनीय, अक

(ङ) निम्नलिखित शब्दों में से उपसर्ग और मूलशब्द छांटिए ।

वाकायदा, प्रतिक्षण,प्रहार, अनभिज्ञ,दुर्भाग्य, अधखिला,सुरक्षा, आशंका,दुर्वचन, सद्गति

(च)निम्नलिखित शब्दों में से प्रत्यय और मूलशब्द छांटिए ।

लिखावट ,आर्थिक,प्रसन्नता,समर्पित,पहाड़ी,प्रतिष्ठित ,सपेरा ,कालिमा

कृपालु,आनंदित,सौदागर.नैतिक,बहाव

2. निम्नलिखित प्रश्नों के उत्तर 2-2 बार लिखो ।

(क) लेखक ने गधे का छोटा भाई किसे और क्यों कहा है?

(ख) प्रस्तुत पाठ में दिए गए उदाहरण के साथ हीर-मोती की सच्ची मित्रता का वर्णन करें।

(ग) इस संसार में कबीर के अनुसार सच्चा संत कौन कहलाता है?

(घ) . मानसरोवर' से कवि का क्या आशय है?

3. औपचारिक पत्र और अनौपचारिक पत्र में अंतर स्पष्ट कीजिए। 2 बार लिखो ।

4 अपनी बहन की शादी में जाने के लिए 5 दिन का अवकाश पत्र लिखो 2 बार लिखो।

Science

Learning outcomes:

(i) Students will be able to Understand the various properties of matter and their physical states.

(ii) Students will be able differentiate between animal cell and plant cell

(iii) Students will be able to draw the diagrams of various cell organelles

(iv) Students will be able to understand functions of various cell organelles.

(v) Students will be able to understand the process of osmosis

Write down the Answers for these Questions and Learn.

1. Give the differences between:

(a) Solid, Liquid and Gas

(b) Animal Cell and Plant Cell

(c) Prokaryotic cell And Eukaryotic cell

(d) Rough Endoplasmic Reticulum and Smooth Endoplasmic Reticulum

2. Draw the well labelled diagrams of:

(a) Endoplasmic Reticulum

(b) Mitochondria

(c) Prokaryotic cell

(d) Nucleus

3. (i) Convert the following temperatures to the Celsius scale.

(a) 293 K (b) 470 K (c) 340 K (d) 550 K

- (ii) Convert the following temperatures to the kelvin scale.
 (a) 25°C (b) 373°C (c) 425°C (d) 175°C
4. Why ice at 0°C is more effective in cooling than water at the same temperature.
5. Give reason for the following observations.
 (a) Naphthalene balls disappear with time without leaving any solid.
 (b) We can get the smell of perfume sitting several meters away.
6. Which organelle is known as the powerhouse of the cell? Why?
7. What would happen to the life of a cell if there was no Golgi apparatus?
8. Write down the Functions of :
- (i) Mitochondria
 (ii) Endoplasmic Reticulum
 (iii) Lysosomes
 (iv) Ribosomes
9. Why should we wear cotton clothes in summer?
10. Why do we see water droplets on the outer surface of a glass containing ice-cold water?

Activity:

Carry out the following osmosis experiment:

Take four peeled potato halves and scoops each one out to make potato cups. One of these potato cups should be made from a boiled potato. Put each potato cup in a trough containing water. Now,

- (a) Keep cup A empty
 (b) Put one teaspoon sugar in cup B
 (c) Put one teaspoon salt in cup C
 (d) Put one teaspoon sugar in the boiled potato cup D.

Keep these for two hours. Then observe the four potato cups and answer the following:

- (i) Explain why water gathers in the hollowed portion of B and C.
 (ii) Why is potato A necessary for this experiment?
 (iii) Explain why water does not gather in the hollowed-out portions of A and D

Social Science

The sun rises two hours earlier in Arunachal Pradesh as compared to Gujarat in the west but the watches show the same time. How does this happen?

2. Explaining the major physiographic divisions of India, show them in the map of India.
3. Find out more about any one of the revolutionary figures you have read about in chapter The French Revolution. Write a short biography of this person.
4. Describe the legacy of the French Revolution for the peoples of the world during the nineteenth and twentieth centuries.
5. What are the different ways of increasing production on the same piece of land? Use examples to explain.
6. Is it important to increase the area under irrigation? Why?
7. What is democracy? Write any five features of Democratic government and any five arguments against democracy.
8. Make a picture on any Rajasthani topic on chart paper.

You can choose from these. (Like any Rajasthani animal, any fort, any dress, any culturally images etc.)

Maths

PART-1

1. Divide $x^3 - 3x^2 + 5x - 3$ by $x - 2$ and find the quotient and remainder.
2. Find three rational numbers between
 - (i) -1 and -2
 - (ii) 0.1 and 0.11
 - (iii) $\frac{5}{7}$ and $\frac{6}{7}$
 - (iv) $\frac{1}{4}$ and $\frac{1}{5}$
3. Locate $\sqrt{5}$, $\sqrt{9.2}$ and $\sqrt{7}$ on the number line.
4. Determine the degree of each of the following polynomials.
 - (i) $3x - 5$
 - (ii) -20
 - (iii) $x^4 - 7x + 5x^5$
 - (iv) $y^3(1 - y^4)$
5. Find $p(0)$, $p(1)$ and $p(-2)$ for the following polynomials
 - (i) $p(x) = 10x - 4x^2 - 3$
 - (ii) $p(y) = (y + 2)(y - 2)$
6. Find the zeroes of the polynomial in each of the following,
 - (i) $p(x) = x - 4$
 - (ii) $g(x) = 3 - 6x$
 - (iii) $q(x) = 2x - 7$
7. By remainder theorem, find the remainder when $p(x)$ is divided by $g(x)$
 - (i) $p(x) = x^3 - 2x^2 - 4x - 1$, $g(x) = x + 1$
 - (ii) $p(x) = x^3 - 3x^2 + 4x + 50$, $g(x) = x - 3$
8. Find the value of m , so that $2x - 1$ be a factor of $8x^4 + 4x^3 - 16x^2 + 10x + m$
9. Factorise the following:
 - (i) $9x^2 + 4y^2 + 16z^2 + 12xy - 16yz - 24xz$
 - (ii) $25x^2 + 16y^2 + 4z^2 - 40xy + 16yz - 20xz$

10. Classify the following numbers as rational or irrational:

- | | | |
|---------------------------|------------------------------------|-------------------------------------|
| (i) $2 - \sqrt{5}$ | (ii) $(3 + \sqrt{23}) - \sqrt{23}$ | (iii) $\frac{2\sqrt{7}}{7\sqrt{7}}$ |
| (iv) $\frac{1}{\sqrt{2}}$ | (v) 2π | |

11.

- | | |
|--|--|
| Simplify (i) $2^{\frac{2}{3}} \cdot 2^{\frac{1}{3}}$ | (ii) $\left(3^{\frac{1}{5}}\right)^4$ |
| (iii) $\frac{7^{\frac{1}{5}}}{7^{\frac{1}{3}}}$ | (iv) $13^{\frac{1}{5}} \cdot 17^{\frac{1}{5}}$ |

12. Factorise $4x^2 + y^2 + z^2 - 4xy - 2yz + 4xz$.
13. Evaluate 105×106 without multiplying directly.
14. Check whether the polynomial $q(t) = 4t^3 + 4t^2 - t - 1$ is a multiple of $2t + 1$.
15. Let x and y be rational and irrational numbers, respectively. Is $x+y$ necessarily an irrational number? Give an example in support of your answer.
16. Are the following statements true or false? Give reasons for your answers.
- (i) Every whole number is a natural number.
- (ii) Every integer is a rational number.
- (iii) Every rational number is an integer.
17. Find five rational numbers between 1 and 2.
We can approach this problem in at least two ways.

PART-2 ACTIVITY

1. Perform following activities and write in notebook:

- **Activity 1: OBJECTIVE** : To construct a square-root spiral.”
- **Activity 2: OBJECTIVE** : To verify the algebraic identity :
 $(a+b)^2 = a^2 + 2ab + b^2$

PART-3 CCT QUESTION

Semi Prime Numbers

A natural number that can be expressed as a product of two prime numbers is called **semi-prime** number.

For example, 77 is semi-prime since it is a product of two prime numbers, 7 and 11.

[Remember that 1 is not prime.]

Question 1. Find the smallest semi-prime number.

Question 2. Two consecutive numbers from 10 to 25 which are semi-prime _____.

- a) 20 and 21
b) 14 and 15
c) 15 and 16
d) 22 and 23



Question 3. Two numbers are said to be co-prime if their HCF is 1. Match the Pair of numbers given in column X with their corresponding properties in Column Y by drawing lines.

Column X

- A. (77, 33)
- B. (75, 88)
- C. (69, 77)
- D. (56, 63)

Column Y

- 1. co primes as well as semi primes
- 2. Neither semiprime nor coprime
- 3. semiprime but not coprime
- 4. coprime but not semiprime