

Millennium World School, Patna
Holiday Homework
2022-23
CLASS: X



Name: _____ Sec. _____ Roll no.: _____

SUSTAINABLE DEVELOPMENT GOALS



Climate Vocabulary

Match each word in the word bank to the given definitions below.

weather climate global climate climate change
glacier global warming greenhouse gases
carbon footprint fossil fuels carbon dioxide
nitrous oxide

- The weather in a smaller area _____
- The average weather condition in a large area _____
- The climate of the entire planet _____
- Any changes to the overall climate of the earth over several years _____
- The temperature of the entire planet _____
- Gases that trap heat in the earth's atmosphere _____
- The amount of carbon dioxide produced due to human energy use _____
- Fuel formed in the earth by plant or animal remains _____
- A large body of ice that very slowly flows down a slope _____
- A greenhouse gas released into the atmosphere from farms that apply large amounts of nitrogen-based fertilizers to help crops grow. _____
- A greenhouse gas release into the earth's atmosphere that contributes to global warming _____

Answer the questions below based on your understanding of sustainability.

1. Name three types of **fossil fuels**: _____

2. What is the measurement of how much carbon dioxide each person adds to the environment? _____

3. Name at least two **greenhouse gases**: _____

4. What greenhouse gas is released into the atmosphere as a result of livestock digesting their food? _____

5. Which greenhouse gas is produced from adding large quantities of nitrogen-based fertilizers to farmland? _____

6. Which greenhouse gas is produced by either deforestation (cutting down forests or large amounts of trees) or burning fossil fuels?

7. What is a large body of ice that slowly moves downhill or across the land?



SUBJECT: ENGLISH

- 1) Design poster on Peace, Justice and Strong Institutions (Goal 16 – Sustainable Development Goal). Use A3 size paper for the poster. Write a slogan for it.
- 2) Read the passage given below carefully:
 1. It was evening in the picturesque seaside town of Rameshwaram, on the southern edge of Tamil Nadu. A cool breeze was gently blowing in from the sea. Along with the sound of waves lapping against the shore could be heard the sweet sound of birds circling overhead.
 2. Among the children playing on the beach was a boy with wavy hair and dreamy eyes. This youngster was Avul Pakir Jainulabdeen Abdul Kalam who later became the eleventh President of India.
 3. While spending time with his friends, Abdul was attracted by the sound of the birds flying above. He carefully observed that a fledgling perched on a boat was trying to take off. It spread its wings, fluttered briefly and sprang up. The air seemed to give the needed thrust for it take off! The bird soared up into the sky. It steered its pace and course with great ease. How Abdul wished he could fly like those beauties in the air!
 4. This passion for flying, aroused by the beautiful birds, later inspired Abdul Kalam to design India's first rocket which successfully sent a satellite Rohini, into orbit on 18th July 1980. It was
 5. called the SLV-3 (Satellite Launch Vehicle). At the time when Abdul was growing up, no one had even dreamt of such a happening.
 6. Rameshwaram, where Abdul was born on 15th October 1931, was a small town with narrow streets lined with old houses made of limestone and brick. The town was famous for its Shiva Temple. Abdul stayed in the house with his father, mother, brothers and sister and led a secure and happy childhood.
 7. Abdul's father, Jainulabdeen was a pious man. He led an austere life without depriving his family of the basic comforts.
 8. In this closely knit family, dinner was always a special meal. During dinner they exchanged views on a variety of topics ranging from family matters to spiritual subjects.
 9. The main income for Abdul's family came from ferrying pilgrims across the sea between Rameshwaram and Dhanushkodi. Pilgrims visiting Rameshwaram made it a point to visit Dhanushkodi, twenty kilometers away in the sea. Dhanushkodi has religious significance.
 10. Ferrying pilgrims fetched good money and the family lived comfortably. However, a devastating cyclone lashed the shores of Rameshwaram and their boat was destroyed. The family lost their only source of livelihood in one swift, tragic stroke.
 11. The enterprising young Abdul wanted to help the family through the crisis. He realized that there was demand for tamarind seeds. He decided he would collect them and sell them to a shop near his house. His family wanted him to concentrate on his studies. He said he would study as well as help his family. Reluctantly, everyone agreed. Even while studying or enjoying the evenings with his friends on the beach, he set aside some time to collect tamarind seeds and sell them to a nearby shop. For this he was paid a princely sum of one anna!
 12. Besides selling tamarind seeds, he helped his cousin Samsuddin to sell the popular Tamil newspaper Dinamani to earn a little more money. At dawn, several bundles of the newspaper, printed in Madras (now Chennai), were thrown on to the platform of Rameshwaram railway station from passing trains. Trains did not stop at Rameshwaram station during those days of the Second World War as almost all of them were commandeered to transport troops.

13. Abdul, after picking up the bundles marked for his area, rushed and handed them over to Samsuddin, who gave Abdul a small amount for the service he had rendered. There was a great demand for Dinamani because people wanted to know about India's freedom struggle and the latest developments in the war.
14. This is how Abdul earned his first wages. However, it was the joy of being able to care for his family that Abdul cherished most. Even decades later, he recalls earning his own money for the first time, with immense pleasure and a sense of pride.
- A. On the basis of your reading of the above passage, answer the following questions:
- 1) Who does this passage tell us about?
 - 2) What inspired Abdul to design a rocket?
 - 3) What was SLV-3?
 - 4) Where did Abdul spend his childhood?
 - 5) Why was dinner a special meal in the Kalam's family?
 - 6) What did Abdul cherish most about the memory of his first earning?
- B. Find the words from the passage which mean the same as the following:
- 1) fascinated (para 3)
 - 2) severe or strict in manner (para 6)
 - 3) Give a suitable title to the passage.
 - 4) Write the adjectives used in the passage.
 - 5) Write antonyms of: -
 - a) destroy b) nearby c) immense d) pious
- 3) Project Work on 'Nelson Mandela':- The following are the sub-topics of the project work:-
1. Nelson Mandela- Childhood and Early Life
 2. His Political Career
 3. Apartheid policy in South Africa
 4. Leadership Qualities of Nelson Mandela
 5. Long Walk to Freedom- An Autobiography
 6. His Famous Quotes
 7. Comparison of Nelson Mandela and Mahatma Gandhi
 8. Conclusion
 9. Bibliography
- 4) Prepare your project file with following details:
1. The project report must be handwritten on A4 size project paper.
 2. The following order will be followed in preparation of the project: -
 - a) Cover page showing project title, student information, school and year.
 - b) Certificate page
 - c) Acknowledgement
 - d) Index- List of contents with page numbers.
 - e) Nelson Mandela- Childhood and Early Life
 - f) His Political Career
 - g) Apartheid policy in South Africa
 - h) Leadership Qualities of Nelson Mandela
 - i) Long Walk to Freedom- An Autobiography
 - j) His Famous Quotes
 - k) Comparison of Nelson Mandela and Mahatma Gandhi
 - l) Conclusion

- m) Bibliography will contain the name of the reference book and its publisher and author.
If you have referred any website for your project, the name of the specific website link must be mentioned.

HINDI

- 1) निम्नलिखित शब्दों की वर्तनी को याद करें।

नीति, नैतिक, व्यवहारिकता, बुनियाद, अध्ययनशील, आत्मसम्मान, अभिप्राय, निर्देश, परीक्षा, कर्तव्य, महत्वपूर्ण, विपत्ति, उत्पन्न, प्रत्यक्ष, साक्ष्य, पारिवारिक, अध्यात्मिक, वृंदावन

- 2) निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रश्नों के उत्तर दें।

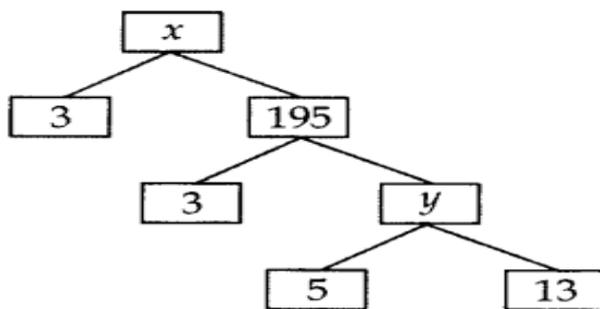
परिश्रम यानी मेहनत अपना जवाब आप ही है। इसका अन्य कोई जवाब ना है, न हो सकता है अर्थात जिस काम के लिए परिश्रम करना आवश्यक हो हम चाहे कि वह किसी अन्य उपाय से पूरा हो जाए ऐसा हो पाना कतई संभव नहीं। वह तो लगातार और मन लगाकर परिश्रम करने से ही होगा। इसी कारण कहा जाता है कि उद्योग या परिश्रम करने वाले सिंहपुरुषों का ही लक्ष्मी वरन किया करती है। सभी प्रकार की धन संपत्ति और सफलताएं लगातार परिश्रम करने से ही प्राप्त हुआ करती है। परिश्रम ही सफलता की कुंजी है, यह अनेक और परीक्षणों की कसौटी पर कसा गया सत्य है। हो सकता है कि एक दो बार कठिन परिश्रम करने पर भी इच्छित सफलता न मिले। इससे घबराकर कर्मशील व्यक्ति चुपचाप नहीं बैठा करते या फिर माथा पीट-पीटकर भाग्य को कोसने नहीं लगते, बल्कि अपनी असफलता या हार के कारणों को जान, कमियों को दूर कर पूरे तन मन से अपने कार्य में पुनः जुट जाते हैं। वे तब तक लगातार जुटे रहते हैं जब तक सफलता आकर उनके चरण नहीं छू ले। दृढ़ निश्चय वाले व्यक्ति ही इस प्रकार, इस सीमा तक जा सकते हैं। परिश्रमी व्यक्ति असफलताओं को पीछे धकेल कर, सफलता और विजय को खींच कर ला सकते हैं।

- i) लक्ष्मी कैसे लोगों का वरन करती है?
क) उद्योग या परिश्रम करने वाले सिंहपुरुषों का
ख) बलशाली पुरुषों का
ग) सिंहों का
घ) सिंह के समान पुरुषों का
- ii) सफलता की कुंजी किसे कहा गया है?
क) धन को
ख) शक्ति को
ग) मनुष्य को
घ) परिश्रम को
- iii) कैसे व्यक्ति असफलताओं को पीछे धकेल कर सफलता प्राप्त करते हैं।
क) ताकतवर
ख) बलशाली
ग) दृढ़ निश्चयी
घ) इनमें से कोई नहीं

2. उपर्युक्त गद्यांश के लिए उचित शीर्षक दें।
3. निश्चय, विजय, असफलता का विलोम शब्द लिखें
4. वाक्य में प्रयोग करें- परिश्रम, दृढ़निश्चय, संभव, आवश्यक
5. समय का सदुपयोग विषय पर लगभग 150 शब्दों में अनुच्छेद लिखें।
6. बड़े भाई साहब पाठ का सभी अभ्यास कार्य उत्तर पुस्तिका में पूरा करें।
7. क्रियाकलाप-चार्ट पेपर पर समास के भेदों तथा उदाहरण को आरेख द्वारा प्रस्तुत करें।

MATHS

- Q1. Select any 5 pairs of composite numbers and find their HCF.
- Q2. Explain why $(17 \times 5 \times 11 \times 3 \times 2 + 2 \times 11)$ is a composite number?
- Q3. Prove that $\sqrt{5}$ is irrational and hence show that $3 + \sqrt{5}$ is also irrational.
- Q4. HCF and LCM of two numbers is 9 and 459 respectively. If one of the numbers is 27, find the other number.
- Q5. In a school, there are two Sections A and B of class X. There are 48 students in Section A and 60 students in Section B. Determine the least number of books required for the library of the school so that the books can be distributed equally among all students of each Section.
- Q6. Two tankers contain 850 liters and 680 liters of petrol. Find the maximum capacity of a container which can measure the petrol of each tanker in the exact number of times.
- Q7. Complete the following factor tree and find the composite number x .



- Q8. Compute the zeroes of the polynomial $4x^2 - 4x - 8$. Also, establish a relationship between the zeroes and coefficients.
- Q9. Find a quadratic polynomial whose zeroes are $3 + \sqrt{55}$ and $3 - \sqrt{55}$.
- Q10. Find a quadratic polynomial, the sum and product of whose zeroes are 0 and $-3/5$ respectively. Hence find the zeroes.
- Q11. Project- Describe early history of the mathematics and write the contribution of any five mathematician.
- Q12. Activity-1: - To draw the graph of a quadratic polynomial and observe: -
- The shape of the curve when the coefficient of x^2 is positive.
 - The shape of the curve when the coefficient of x^2 is negative.
 - It's number of zero's

SOCIAL SCIENCE

- 1) Prepare a project file with following details:
- The total length of the project report should not be more than 10-12 written pages of A-4 size sheet.
 - The project report should be handwritten and credit will be awarded to original drawings, illustrations and creative use of eco-friendly material.
 - The project report should be developed and presented in this order
 - Cover page showing project title, student information, school and year.
 - Certificate page
 - Acknowledgement
 - Index- List of contents with page numbers.
 - Introduction
 - Relevant content with headings
 - Summary and conclusions based on findings.
 - Bibliography: should have the Title, author, publisher and if a website the name of the website with the specific website link which has been used.

2) Projects [Choose any one topic]

Consumer Awareness:

3) The content must cover the following:

- Meaning of Consumer Awareness
- Forms of Consumer Exploitation / Malpractices
- Factors causing exploitation of the Consumers
- Enactment of COPRA 1986 and its benefits
- Role of WTO in protection of Consumers
- Rights and Duties of the Consumers
- Consumer Protection Measures
- Relevant case studies (any two)

OR

Social Issues

Prepare a project on any three of the following social evils still prevailing in our society; highlighting the reasons, effects and suggest solutions to get them eliminated from our country

- Poverty
- Illiteracy
- Corruption
- Gender Inequality
- Inflation
- Domestic violence against women and child abuse

The students must write about following key matter:

a. social issues in Indian Society

b. Reforms initiated to combat the social issues c. Role of Popular leaders and movements.

OR

Sustainable Development

The students must write about following:

- i) Need and importance of sustainable development
- ii) Pillars of sustainable development goals and approaches of sustainable development
- iii) Steps taken by government of India x outcomes of sustainable development conclusion

SCIENCE

BIOLOGY

Activity 1: Fuel Consumption

Find out from your mother or any elder at home that for how many days your family use one LPG cylinder? Tabulate your findings on number of LPG cylinder used in a month for last 6 months. What practices may be adopted in cooking to reduce the consumption of LPG write down a detailed report on same on a coloured A 4 sheet.

Activity 2 : To study the effect of polluted water and oil spills on bird population.

- a) Take three feathers of a bird.
- b) Dip one feather in the water, another in oil and the third one in soap water.
- c) Note down the observations in the following table in your notebook and write down its effect on their population.

Bird feather	Your observation
In water	
In oil	
Soap water	

- d) The feather dipped in water retains their structure and their water repelling properties whereas the feathers dipped in oil and soap water loses them.

Answer the questions: (To be solved in your biology Notebook)

1. Name the following

- The process in plants that links light energy with chemical energy
- Organisms that can prepare their own food
- The cell organelle where photosynthesis occurs
- Cells that surround a stomatal pore
- Organisms that cannot prepare their own food
- An enzyme secreted from gastric glands in stomach that acts on proteins.

2. "All plants give out oxygen during day and carbon dioxide during night". Do you agree with this statement? Give reason.

3. How do the guard cells regulate opening and closing of stomatal pores?

4. Two green plants are kept separately in oxygen free containers, one in the dark and the other in continuous light. Which one will live longer? Give reasons.

5. If a plant is releasing carbon dioxide and taking in oxygen during the day, does it mean that there is no photosynthesis occurring?

Justify your answer.

6. Why do fishes die when taken out of water?

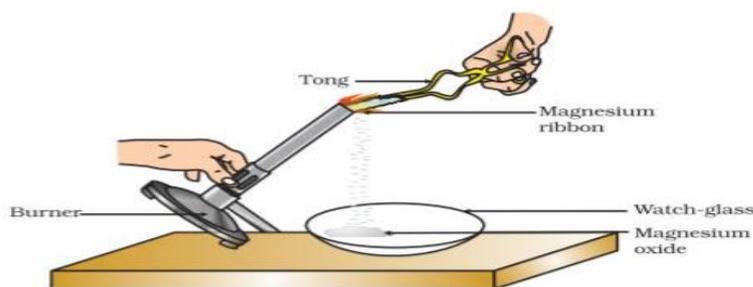
7. Differentiate between an autotroph and a heterotroph.

8. Is 'nutrition' a necessity for an organism? Discuss.

9. What would happen if green plants disappear from earth?

10. Leaves of a healthy potted plant were coated with vaseline. Will this plant remain healthy for long? Give reasons for your answer.

CHEMISTRY

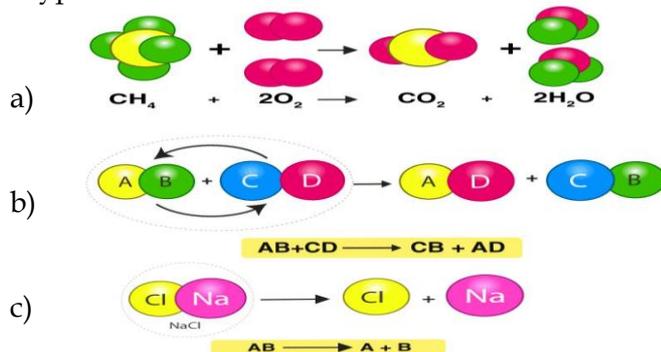


Describe the above activity and answer the following questions (In your Chemistry Notebook)

Q1. What will happen when magnesium ribbon is burnt in air?

Q2. What is the Color of magnesium?

Q3. Identify the types of chemical reactions and describe it with examples



Q4. Project work on chart paper Draw a flow chart to describe the various types of chemical reactions.

Q5. Why is respiration considered as exothermic process?

Q6. Why does the colour of copper sulphate solution change when an iron nail is dipped in it?

Write

two observations.

Q7. Hydrogen being a highly inflammable gas and oxygen being a supporter of combustion, yet water which is a compound made up of hydrogen and oxygen is used to extinguish fire. Why?

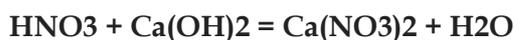
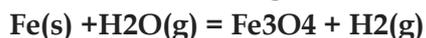
Q 8. Write a balanced equation for the following chemical reactions.

i) Hydrogen + Chloride \rightarrow Hydrogen chloride

ii) Barium chloride + Aluminum sulphate \rightarrow Barium sulphate + Aluminium chloride

iii) Sodium + Water \rightarrow Sodium hydroxide + Hydrogen

Q9. Balance the following chemical equation.



PHYSICS

Answer the questions : (To be done in your physics notebook)

1. With the help of figures, discuss the six cases of image formations by a concave mirror.
2. Discuss the nature of light as given by Albert Einstein.
3. Write the uses of a concave mirror in our daily life.
4. Define the principal focus of a convex mirror.
5. State the laws of refraction of light.
6. Distinguish between virtual and erect images.