

NEW ERA PUBLIC SCHOOL DWARKA

HOLIDAY HOMEWORK(2026-2027)

CLASS-VIII

SUBJECT--ENGLISH

TASK-1 SIKKIM ORGANIC FARMING NEWSPAPER

Create a **4-page newspaper** based on the theme “**Organic Farming in Sikkim.**” Imagine you are a young journalist reporting about Sikkim’s eco-friendly lifestyle and farming practices.

Instructions:

1. Your newspaper should include the following sections:

- **Headline of the Newspaper**
- **Front Page News Article on organic farming in Sikkim**
- **Farmer Interview (imaginary)**
- **Weather Report of Sikkim**
- **Advertisement Section for organic products**
- **Fun Corner (Poster/Crossword about Organic Farming methods)**
- **Did You Know? facts about Sikkim**

Additional Guidelines:

- **Use A3 sheets/chart paper**
- **Add colourful illustrations, borders, and creative headings.**
- **Handwriting should be neat**
- **Mention your **name, class, and section** clearly.**

TASK-2 UNSEEN COMPREHENSION

Complete the worksheet given below and paste it in your English Literature notebook.

In today’s fast-moving world, people often measure success by wealth, popularity, or social status. However, true success cannot always be seen from the outside. A person may achieve fame and still feel unhappy, while another may live a simple life yet remain deeply satisfied.

Dr. A.P.J. Abdul Kalam once said that dreams are not the things we see while sleeping, but the things that do not let us sleep. His life reflected this belief. Despite facing financial difficulties during childhood, he remained focused on learning and self-improvement. Instead of complaining about his circumstances, he used them as motivation to work harder.

Many students today fear failure so much that they stop taking risks altogether. They avoid difficult tasks because they are afraid of making mistakes. Yet failure is often the greatest teacher. Every invention, discovery, or achievement is built upon repeated attempts and lessons learned from errors. A person who never fails usually never tries anything challenging.

Success, therefore, is not merely about reaching a destination; it is also about developing courage, patience, and determination during the journey.

On the basis of reading the passage, answer the following questions

1. What is the main idea of the passage?

- (a) Wealth is the only measure of success
- (b) Success is connected with personal growth and perseverance
- (c) Famous people are always unhappy
- (d) Students should avoid risks

2. Why has Dr. A.P.J. Abdul Kalam been mentioned in the passage?

- (a) To describe his childhood hobbies
- (b) To show that success comes easily
- (c) To give an example of determination and hard work
- (d) To compare him with modern students

3. Which statement best explains the line “*dreams are the things that do not let us sleep*”?

- (a) Dreams disturb our sleep at night
- (b) Ambitions motivate people to work hard continuously
- (c) Successful people sleep less
- (d) Dreams are more important than studies

4. What can be inferred about students who fear failure?

- (a) They become more successful than others
- (b) They avoid opportunities for growth
- (c) They always perform well in life
- (d) They are naturally intelligent

5. According to the passage, why is failure called a “greatest teacher”?

- (a) It guarantees success immediately
- (b) It helps people learn and improve through mistakes
- (c) It prevents people from taking risks
- (d) It makes life easier

6. Which quality is MOST important for achieving success according to the passage?

- (a) Luck
- (b) Popularity
- (c) Determination
- (d) Social status

7. Give the synonym for the word ‘Perseverance’ as used in the passage.

8. Summarize the above passage in not more than 100 words. Give it an appropriate title.

Subject-Social Science

- 1) The foundation of organic agriculture in Sikkim relies on a set of sustainable, cyclical field activities.



Write a brief note on organic farming on the basis of the following:

- Soil Enrichment
- Vermicompost Production
- Mulching (Acchadana)
- Crop Rotation
- Botanical Pest Control
- Weed Management

- 2) Make a poster depicting the beauty of Organic farming.

Worksheet

RESHAPING INDIA'S POLITICAL MAP

Q.1 Which event marked the beginning of the Delhi Sultanate?

- (a) Defeat of Prithviraj Chauhan (1192) (b) First Battle of Panipat (1526)
(c) Battle of Talikota (1565) (d) Formation of the Khalsa (1699)

Q.2 Who founded the Mughal Empire in India?

- (a) Akbar (b) Aurangzeb (c) Babar (d) Sher Shah Suri

Q.3 What was the main reason for Central Asian invasions of India during the 11th century?

- (a) To spread education (b) To build temples
(c) To gain India's wealth and spread religion (d) To promote trade only

Q.4 Which Vijayanagara ruler is known for composing the Telugu epic Amuktamalyada?

- (a) Harihara (b) Krishnadevaraya (c) Bukka (d) Rana Kumbha

Q.5 What was the name of Akbar's policy of religious tolerance?

- (a) Jizya (b) Sulh-i-kul (c) Iqta (d) Mansabdari

Q.6 Which fort, built by Rana Kumbha, is famous for its 36-km wall?

- (a) Chittorgarh (b) Red Fort (c) Kumbhalgarh Fort (d) Daulatabad

Q.7 Who established the Khalsa in 1699 to resist Mughal persecution?

- (a) Guru Nanak (b) Guru Arjan (c) Guru Tegh Bahadur (d) Guru Gobind Singh

Q. 8 Which battle ended the Vijayanagara Empire's dominance in 1565?

- (a) Battle of Haldighati (b) Battle of Talikota (c) Battle of Saraighat (d) Second Battle of Panipat

Q.9 What system did the Ahoms use to mobilise men for military and labour duties?

(a) Paik system (b) Iqta system (c) Mansabdari system (d) Jizya system

Q.10 What was the primary source of wealth for Delhi sultans and Mughal emperors?

(a) Trade with Europe (b) Shipbuilding (c) Temple donations (d) Plunder and taxes

Fill in the blanks

Q.1 The Vijayanagara Empire's capital was located at _____ known for its grand temples.

Q.2 _____ a tax on non-Muslims, was abolished by Akbar but reimposed by Aurangzeb.

Q.3 Akbar's finance minister, _____ introduced an efficient land revenue system.

Q.4 The _____ kingdom in Assam used rivers and forests to defeat Mughals at Saraighat in 1671.

Q.5 Guru _____ was beheaded by Aurangzeb in 1675 at Chandni Chowk.

Match the following

Question 1.

| Column A | Column B |
|-----------------------------|---|
| (a) First Battle of Panipat | (i) Established the Khalsa |
| (b) Krishnadevaraya | (ii) Moved capital to Daulatabad |
| (c) Guru Gobind Singh | (iii) Marked the beginning of the Mughal Empire |
| (d) Rana Kumbha | (iv) Composed Amuktamalyada |
| (e) Muhammad bin Tughlaq | (v) Built Kumbhalgarh Fort |

WORKSHEET CLASS VIII

CH.1 NATURAL RESOURCE AND THEIR USE

Q1. When does an element of Nature become a 'resource'?

- a) When it is discovered by scientists.
- b) When humans use it for sustenance or create new things from it.
- c) When it is given a scientific name and categorised.
- d) When it is located deep under the ocean.

Q2. What three conditions must be met for an entity to be called a natural resource?

- a) It must be renewable, abundant, and useful for energy.
- b) It must be discovered, named, and sold in a market.
- c) It should be technologically accessible, economically feasible, and culturally acceptable.
- d) It should be a solid, liquid, or gas found in nature.

Q3. Which of the following is NOT a category of natural resources based on their use?

- a) Resources essential for life
- b) Resources for materials
- c) Resources based on their origin
- d) Resources for energy

Q4. What is the key characteristic of a renewable resource?

- a) It is created over millions of years and cannot be replenished.
- b) It exhibits the characteristics of restoration and regeneration over time.
- c) It is always available in unlimited quantities regardless of human action.
- d) It can only be used once before it is completely gone.

Q5. Which ancient Indian botanical science focuses on the study and care of plants and trees?

- a) Lokasangraha
- b) Arghyam
- c) Vrikshayurveda
- d) Wootz Steel

Q6. What is the main condition required for a resource like a forest to remain renewable?

- a) The government must declare it a national park.
- b) We must stop using timber from the forest completely.
- c) The natural rhythm of restoration and regeneration must not be disturbed.
- d) New trees must be planted every year, regardless of the type.

Q7. What is an example of a non-renewable resource?

- a) Solar energy
- b) Timber from forests
- c) Coal and petroleum
- d) Energy from flowing water

Q8. What is the 'natural resource curse' or the 'paradox of plenty'?

- a) The environmental pollution caused by extracting natural resources.
- b) Conflicts and wars fought to gain control over natural resources.
- c) When regions rich in natural resources experience slower economic growth.
- d) The displacement of people from resource-rich areas.

Q9. How do human actions disturb the renewable cycle of glaciers in the Himalayas?

- a) By regulating fishing during the spawning season.
- b) Through fossil fuel-driven industrialization and cutting down forests.
- c) By building microhydel plants to generate electricity.
- d) By offering arghyam to the sun-god in gratitude.

Q10. What problem associated with the cement industry is highlighted?

- a) It uses too many renewable resources.
- b) It is one of the most polluting industries, releasing fine dust.
- c) It is not economically feasible for modern construction.
- d) It creates products that are not culturally acceptable.

Q11. What does the term 'ecosystem services' refer to?

- a) The financial cost of cleaning up environmental damage.
- b) When natural processes of an ecosystem benefit humans.
- c) The process of industries creating waste that is discharged into rivers.
- d) The jobs created by industries located near natural resources.

Q12. What was a major cause of groundwater overexploitation in Punjab?

- a) A shift to growing traditional seeds that required more water.
- b) The widespread adoption of organic farming.
- c) A shift to high-yielding varieties of wheat and paddy during the Green Revolution.
- d) The state government's policy of charging high prices for electricity.

Q13. What significant achievement did Sikkim accomplish in 2016?

- a) It built the world's largest solar park.
- b) It became a 100 per cent organic state.
- c) It resolved its water-sharing disputes with all neighboring states.
- d) It completely stopped using non-renewable resources.

Q14. What is the main purpose of the International Solar Alliance (ISA), launched by India and France?

- a) To fund the construction of cement factories that use less energy.
- b) To promote traditional farming practices across the world.
- c) To create a coalition of sunshine-rich countries committed to harnessing solar power.
- d) To resolve international conflicts over the sharing of river water.

Q15. What does 'stewardship' mean in the context of natural resources?

- a) Owning natural resources for personal profit.
- b) Using resources in a way that enables restoration and regeneration.
- c) Documenting the history of resource use in different countries.
- d) Selling natural resources to the highest international bidder.

Q16. What is an example of an ecosystem function?

- a) A farmer getting a premium price for organic vegetables.
- b) A forest naturally filtering water and preventing soil erosion.
- c) A power plant generating electricity from coal.
- d) Tourists visiting a region to see its organic farms.

Q17. Why is the uneven distribution of natural resources significant for human societies?

- a) It ensures that all countries are economically equal.
- b) It has no impact on where people live or how countries interact.
- c) It is the primary cause of climate change and biodiversity loss.
- d) It shapes human settlements, trade patterns, and international relations.

Q18. What is a negative long-term consequence of the Green Revolution in Punjab?

- a) The state became dependent on food imports.
- b) Traditional seeds became more popular than high-yielding varieties.
- c) Groundwater levels dropped significantly and became contaminated with chemicals.
- d) The soil became too fertile for growing any crops.

Q19. What kind of building materials are promoted as sustainable alternatives to cement?

- a) Imported marble and granite.
- b) Traditional materials like stone and mud, and recycled materials.
- c) Newly developed plastics made from petroleum.
- d) Steel and glass for all new constructions.

Q20. Why do conflicts over natural resources, like the Kaveri River water, occur?

- a) Because natural resources are always distributed evenly between states.
- b) Because nature does not pay attention to political boundaries.
- c) Because international laws prevent the sharing of any resources.
- d) Because one state always has an absolute right to all resources within its territory.

Q21. What is the meaning of lokasangraha as mentioned in the Bhagavad Gītā?

- a) The personal desire to accumulate wealth from natural resources.
- b) The idea that everyone must act for the wellbeing of all.
- c) The principle of fighting wars to gain control over resources.
- d) The scientific study of nature and its cycles.

Q22. How can India avoid the 'natural resource curse'?

- a) By stopping the extraction of all natural resources.
- b) By selling its raw materials to the highest international bidder.
- c) By investing in the development of industries to convert resources into higher-value products.
- d) By focusing solely on agriculture and ignoring industrial development.

Q23. What problem can arise from discharging untreated industrial waste into rivers?

- a) The river water becomes more suitable for marine life.
- b) It helps in the natural restoration and regeneration cycle of the river.
- c) The river can become poisonous and unable to support life.
- d) It replenishes the groundwater levels in the surrounding areas.

SUBJECT-SCIENCE

Task 1:

Sikkim is a beautiful Himalayan state known for its clean environment and organic farming. Farmers in Sikkim grow crops like cardamom, ginger, maize, rice, and mushrooms. Among these, mushrooms are becoming very popular because they need less land, grow quickly, and are highly nutritious.



Perform this activity on mushrooms and prepare a project using A-4 size sheets (not more than 6 sheets) and handmade folder with the following parameters:

1. Types of Mushrooms grown in Sikkim →
2. Scientific name →
3. Nutritional value →
4. 🍄 Why Are Mushrooms Called “Magic Crops”?
5. 🌍 Benefits to Environment.
6. Cultivation of mushroom on large scale in India.

Activity

1. Take a large sized mushroom (as large as possible)
2. Cut off its stalk
3. Place it gently, face down on square card board piece covered with paper.
4. Do not exert pressure on the mushroom and cover it with a glass bowl. Leave it for 3-4 days.
5. Thereafter remove the glass cover on the mushroom and click a picture of the pattern of spores obtained on the card board. (You can also click pictures of the entire activity and paste them on the folder)
6. Paste the picture on the project sheet.

Task 2:

The technology is spreading worldwide. So are the latest innovations in the field of robots. With the latest invention of First Humanoid Robot named **SOPHIA**, the scientists and technology have given a tough challenge to future generation.



Prepare a report in your science notebook including pictures where SOPHIA will be helping humans with its fast and high-tech functions.

Assignment to be done in Science notebook

1. A student observes a microorganism from a pond water sample under a microscope. The student notes that the organism is green and moves using specialized structures. Based on the description in the textbook, which category of microorganism is the student most likely observing?.

(a) Amoeba (b) Fungi (c) Algae (d) Bacteria

2. Which of the following statements about plant and animal cells is correct, based on the chapter?

- (a) Both plant and animal cells have a cell wall.
- (b) Animal cells have a large central vacuole, while plant cells do not.
- (c) Plant cells have chloroplasts and a cell wall, which animal cells lack.
- (d) Both plant and animal cells have plastids that store substances.

3. If a laboratory has only a foldscope, what is its primary limitation when studying microorganisms compared to a high-powered laboratory microscope?.

- (a) It cannot be used to observe unicellular organisms.
- (b) It does not provide the same level of detail as a high-powered microscope.
- (c) It cannot be used to observe the nuclei of cells.
- (d) It is not foldable and is difficult to transport.

4. A farmer observes that his crop yield is consistently low. Based on the chapter, which microorganism, when grown with his legume crops, can help improve the soil naturally without chemical fertilizers?

- (a) Lactobacillus (b) Rhizobium (c) Bread mould (d) Yeast

5. A group of scientists is studying a newly discovered organism. They find that its cells are prokaryotic, meaning they lack a well-defined nucleus with a nuclear membrane. According to the textbook, which of the following is most likely this organism?

- (a) Algae (b) Yeast (c) Protozoa (d) Bacteria

6. You have a piece of dough that you want to make soft and fluffy for baking. Based on the activity in the chapter, which ingredient is essential for this purpose and why?.

- (a) Sugar, because it acts as a food source for the yeast to grow.
(b) Warm water, because it helps the yeast produce lactic acid.
(c) Yeast, because it releases carbon dioxide gas which forms bubbles.
(d) Salt, because it acts as a preservative and prevents the dough from going bad.

7. Which of the following best describes the function of a cell wall in a plant cell?

- (a) It controls the movement of substances in and out of the cell.
(b) It provides rigidity and strength to the plant.
(c) It contains chlorophyll for photosynthesis.
(d) It is the site where most life processes take place.

8. Based on the levels of organization described in the chapter, what is the correct hierarchy from the simplest to the most complex level?

- (a) Organ → Cell → Tissue → Organ System → Organism
(b) Organism → Organ System → Organ → Tissue → Cell
(c) Cell → Organ → Tissue → Organ System → Organism
(d) Cell → Tissue → Organ → Organ System → Organism

SECTION – B

9. Explain how the shape and structure of a nerve cell are specifically adapted to its function in the human body.

10. A person prepares a pickle by adding a high concentration of salt to vegetables. Explain, based on the information in the chapter, why this method prevents microbial growth and spoilage.

11. Explain the difference between unicellular and multicellular organisms with examples mentioned in the chapter.

12. How do some microorganisms, like bacteria and fungi, act as "key players in cleaning the environment"?

13. Case Study-1: The Tiny Food Factory

Rohit, a young chef, was fascinated by the fermentation process. He learned that many of his favorite foods, from bread to idli, rely on tiny, invisible organisms. He decided to experiment with making his own sourdough bread, which requires a starter culture of microorganisms. Rohit knew

that these microbes need specific conditions to work their magic. He prepared a dough by mixing flour, water, and a pinch of sugar, and then added a small amount of yeast. He kept the bowl in a warm corner of his kitchen, away from drafts. To his delight, after a few hours, the dough had risen, become fluffy, and had a distinctive smell.

Based on the passage and the chapter, answer the following questions:

- (a) What is the function of the sugar and warm water in Rohit's dough preparation?
- (b) How did the yeast make the dough rise and become fluffy?
- (c) What is the name of the process by which the yeast broke down the sugar?
- (d) Besides yeast, name another microorganism mentioned in the chapter that helps in the fermentation of food items.

14. Case Study-2: The Ocean's Unseen Powerhouse

A marine biologist, Dr. Anya, was studying the health of a coral reef. She explained to her team that the ocean's ecosystem is heavily dependent on microscopic plant-like organisms. These tiny organisms are so abundant that they produce a significant portion of the Earth's oxygen supply. She highlighted their importance not just for oxygen production but also as a food source for aquatic life and even for humans as a health supplement. Dr. Anya also warned that their existence is threatened by human activities like pollution.

Based on the passage and the chapter, answer the following questions:

- (a) What are the microscopic organisms that Dr. Anya is referring to?
- (b) How do these organisms produce oxygen?
- (c) Name two other uses of these organisms mentioned in the chapter.
- (d) Why is it important to conserve these tiny organisms?

SUBJECT-HINDI

शब्द-दर्पण

इस गतिविधि में बच्चे एक लकड़ी के बोर्ड या मोटे कार्डबोर्ड पर हिंदी का एक 'शक्तिशाली शब्द' लिखेंगे और उसे शीशों (Mirrors) और क्ले (Clay) से सजाएंगे।



निर्देश:

1. **आधार (Base):** किसी भी आकार का मोटा कार्डबोर्ड या एमडीएफ बोर्ड लें।
 2. **मुख्य शब्द :** बोर्ड के बिल्कुल बीचों-बीच पेंसिल से हिंदी का एक अर्थवान शब्द लिखें (जैसे: आस्था, शक्ति, प्रेम, सत्य, या सृजन आदि)।
 3. **क्ले और मिरर वर्क:**
 - शब्द की बाहरी रेखा (Outline) पर क्ले की पतली 'कॉइल्स' (बत्तियाँ) बनाकर चिपकाएँ ताकि शब्द ३-डी दिखे।
 - शब्द के चारों ओर पारंपरिक 'लिप्पन आर्ट' के पैटर्न बनाएँ और उनमें छोटे-छोटे विभिन्न आकारों के शीशे (गोल, त्रिकोण, हीरे के आकार के) चिपकाएँ।
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SUBJECT-MATHS

I. Activity :

Roll no 1- 15: **Square Root Calculator Wheel** – An interactive math tool or quick relation between squares and roots.

- Make a rotating wheel model showing numbers, their squares, and square roots. Use Cardboard, split pin, markers.
- It should have two rotating circular discs.
- Student will have to Align a number with its square and square root.

Roll no 15 – 30 : **Cube City Model** - Cubes in architecture to understand volume comparison and to build Mathematical connection with our surroundings.

- Build mini city buildings made with cubes of different dimensions using cardboards, coloured sheets and other decorative materials to depict the 3D model of a city.
- Buildings represent $1^3, 2^3, 3^3$.
- Compare storage/volume capacities of these buildings and write them on an A4 size sheet neatly.

II. Assignment :

A Square and A Cube

Section A – Multiple Choice Questions ($10 \times 1 = 10$ marks)

1. Which of the following numbers will remain open in the locker puzzle?
(a) 18 (b) 20 (c) 25 (d) 30
2. Which of the following numbers is not a perfect square?
(a) 961 (b) 729 (c) 864 (d) 1024
3. The number of factors of a perfect square is always:
(a) Even (b) Odd (c) Prime (d) Composite
4. Which of the following can never be the units digit of a square number?
(a) 4 (b) 5 (c) 8 (d) 9
5. If $35^2 = 1225$, then 36^2 is:
(a) 1261 (b) 1296 (c) 1305 (d) 1285
6. The square root of 1764 is:
(a) 38 (b) 40 (c) 42 (d) 44
7. Which of the following is a perfect cube?
(a) 432 (b) 512 (c) 768 (d) 972
8. The cube root of 2197 is:
(a) 11 (b) 12 (c) 13 (d) 14
9. A perfect square can have how many zeros at the end?
(a) Odd number of zeros (b) Even number of zeros (c) Exactly one zero (d) Exactly three zeros
10. Which statement is true?
(a) Every cube number has an even number of factors (b) Every perfect square is also a perfect cube
(c) The cube of an odd number is odd (d) Every number ending in 6 is a perfect square

Section B – Very Short Answer Questions ($10 \times 2 = 20$ marks)

1. Write the first six perfect square numbers.
2. Find the next two numbers in the pattern: 1, 4, 9, 16, 25, __, __
3. How many numbers lie between 14^2 and 15^2 ?
4. Determine whether 2025 is a perfect square.
5. Find the square root of 324.
6. State whether 3375 is a perfect cube or not.
7. Find the cube root of 10648.
8. Write the prime factorisation of 900.
9. Which perfect square lies between 150 and 200?
10. Find the smallest perfect square divisible by both 6 and 15.

Section C – Long Answer Questions ($10 \times 5 = 50$ marks)

1. In the locker puzzle, explain why only lockers with square numbers remain open at the end.
2. Show that 576 is a perfect square using prime factorisation. Hence find its square root.
3. Using the pattern of consecutive odd numbers, prove that:
 $1 + 3 + 5 + 7 + 9 + 11 + 13 = 49$
4. Find the smallest number by which 5400 must be multiplied so that the product becomes a perfect square. Also find the square root of the resulting number.
5. Explain why a perfect square can never end with the digits 2, 3, 7, or 8.
6. Find the cube root of 27000 using prime factorisation.
7. Verify whether 1728 is a perfect cube. If yes, find its cube root.
8. Find the successive differences of the following perfect cubes and identify the pattern:
1, 8, 27, 64, 125
9. A square park has an area of 2025 m^2 .
 - Find the length of each side.
 - Find the perimeter of the park.
10. A number has prime factorisation: $2^4 \times 3^3 \times 5^2$
Determine:
 - whether the number is a perfect square,
 - whether it is a perfect cube,
 - the smallest number by which it should be multiplied to become a perfect cube.

Section D – Case Study Problems ($5 \times 4 = 20$ marks)

Case Study 1: The Locker Mystery

In the palace of Queen Ratnamanjuri, 100 lockers are numbered from 1 to 100. The lockers are toggled according to the rule described in the chapter.

1. Which locker numbers remain open till the end?
2. Why does locker 36 remain open?
3. How many factors does 49 have?
4. Which of the following lockers will be closed: 64, 72, 81, 100?

Case Study 2: Square Garden

A square garden has an area of 784 m^2 . Square of a number can be found by multiplying the number with itself. Answer the following questions based on the concept of squares.

1. Find the side length of the garden.
2. Find its perimeter.
3. Is 784 a perfect square? Justify.
4. How many numbers lie between 27^2 and 28^2 ?

Case Study 3: Cube Stacking

Ravi stacks small cubes to form larger cubes. He first uses unit cubes. A unit cube has all the measurements of edges as 1 unit only. He also observes that volume of a cube is a^3 . Answer the following questions based on the concepts Ravi has studied:

1. How many unit cubes are required to make a cube of side 6 units?
2. Is 512 a perfect cube?
3. Find the cube root of 4096.
4. Can a perfect cube end with exactly two zeros? Explain.

Case Study 4: Consecutive Odd Numbers

Meena observes the following while adding odd numbers:

$$1 + 3 + 5 + 7 = 16$$

Answer the following questions based on her observation:

1. Find: $1 + 3 + 5 + 7 + 9$
2. Which square number is obtained by adding the first 8 odd numbers?
3. Is 38 a perfect square using the odd-number subtraction method?
4. Find 41^2 using the pattern:

$$n^2 = (n-1)^2 + (2n-1)$$

Case Study 5: Ramanujan's Taxicab Number

The great Indian Mathematician Ramanujan was once travelling by a cab. The number plate of the cab had 1729 written on it. Ramanujan observed that 1729 is a very special number. He did the following calculations : $1729 = 1^3 + 12^3 = 9^3 + 10^3$. Answer the following questions based on his observations:

1. Verify: $1^3 + 12^3 = 1729$
2. Verify: $9^3 + 10^3 = 1729$

3. Find the cube of 11.
4. Find the difference: $13^3 - 12^3$

Subject-Computer Science

1. Create an awareness Poster (A3 size sheet) on DIGITAL ARREST (R No. 1-14)

- Fake police/video call drawing
- Warning signs of scams
- Safety tips
- Cyber safety helpline: 1930 (India)
- Threatening arrest

2. Chart Paper Project (R No. 15-28)

Divide chart into sections and write with different colours.

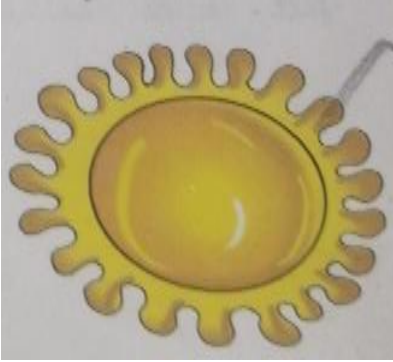
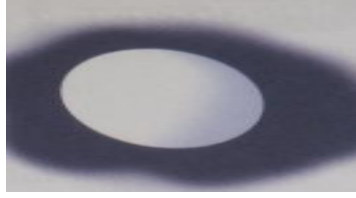
| Topic | Information |
|-------------------------|----------------------------------|
| What is Digital Arrest? | Online scam using fear |
| Common Tricks | Fake police calls, courier scams |
| Warning Signs | Urgent payment demand |
| Safety Measures | Verify identity, tell parents |
| Emergency Help | Cybercrime portal/1930 |



विषय- संस्कृत

प्रश्न. निम्नलिखित प्रश्नों के उत्तर दीजिए-

- (-)
- (=)



(=) दिए गए शब्दों से संस्कृत में वाक्य रचना कीजिए।

- 1.
- 2.
- 3. अपि
- 4. अद्य

नोट- सम्पूर्ण कार्य ए-4 शीट में करें।

प्रश्न 1. निर्देशानुसार उत्तर लिखिए।

| | तृतीया एकवचन | षष्ठी बहुवचन |
|----------|--------------|--------------|
| क) बन्धु | | |
| ख) भानु | | |

प्रश्न 2. सन्धि या विच्छेद कीजिए।

क) गुरुणामपि ख) आक्रमणम् + अभवत्

प्रश्न 3. संस्कृत-भाषायाम् अनुवादम् कुरुत।

क) नौकर ठण्डा पानी लाया । ख) यह काम एक आदमी का नहीं है।

प्रश्न 4. विशेषणों का उचित रूप लिखिए।

क) (बद्ध)नराः ख) (सुप्त) शावकौ

प्रश्न 5. रेखाङ्कित शब्दों को आधार मान कर प्रश्ननिर्माण कीजिए।

क) एतत् चित्रम् अस्ति। ख) बालकस्य नाम मोहनः अस्ति।

ग) सः हरिनगरे निवसति। घ) नदी हिमालयात् निर्गच्छति।

प्रश्न 6. विलोम शब्द लिखिए। क) नीचैः ख) इतः

प्रश्न 7. निम्नलिखित का पर्यायवाची लिखिए। क) तरुः ख) भानुः

प्रश्न 8. रिक्तस्थान की पूर्ति कीजिए।

क) त्वमेव माता च त्वमेव। ख) सर्वम् मम देव-देव।

प्रश्न 9. निर्देशानुसार शब्दरूप लिखिए।

क) नदी शब्दरूप द्वितीया विभक्ति तीनों वचनों में

ख) नदी शब्दरूप पञ्चमी विभक्ति तीनों वचनों में

प्रश्न 10. निर्देशानुसार धातुरूप लिखिए।

क) वद् धातु लङ् लकार मध्यम पुरुष तीनों वचनों में

ख) वद् धातु लृट् लकार प्रथम पुरुष तीनों वचनों में

ग) वद् धातु लट् लकार उत्तम पुरुष तीनों वचनों में