



Mukand Lal Public School

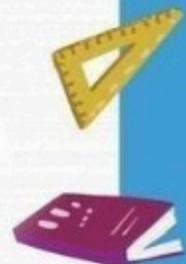
Sarojni Colony, Yamunanagar

AFFILIATION NO:- 530294 SCHOOL CODE :- 40279

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Holidays Homework

Class - IX (2025-26)



Dear Children

Greetings

Summer vacations are always exciting and overwhelming. Isn't it so? This is the time to take a break from the set routine, explore new interests, hobbies and reconnect with the loved ones.

During vacation you must engage in activities that stimulate your curiosity, broaden your horizons and expand your knowledge. Read books that ignite your creativity. Challenge yourself to learn something new, push your boundaries- whether it's learning a musical instrument, mastering a new sport or developing artistic skills, this is your time to shine and unlock your full potential.

Take care of your health. Go for a walk every day . Do exercise. Help your parents in household chores. Show that you care for them. Spend quality time with your grandparents. Listen to the beautiful stories of their past. Learn games that they used to play.

Above all, have fun! laugh, play, and enjoy the freedom that comes with this vacation.

A very creative and interesting holidays homework has been assigned to each one of you. Use your creativity to complete the projects given. Use eco friendly material. **USE OF THERMOCOL SHEETS OR PLASTIC SHEETS WILL NOT BE ACCEPTED AT ALL.** These projects will be assessed for internal grades and the best ones will be displayed in the annual exhibition.

Enjoy summer break to the fullest and bounce back to school with renewed energy, enthusiasm and a treasure trove of beautiful memories.

Happy Holidaying!!!

Principal

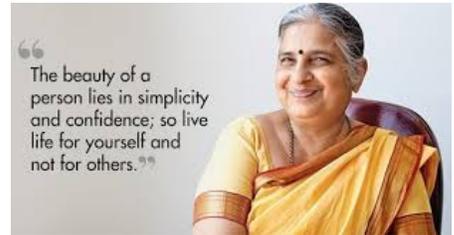
ENGROSSING ENGLISH

Common for All

Suggested books for reading

Sudha Murthy- grandparents' bags of stories

Ruskin Bond - Mysterious tales from the hills



Vocabulary Activity Sheet

1. **Admonish** – To warn or reprimand firmly
2. **Articulate** – To express thoughts clearly in words
3. **Benevolent** – Kind and generous
4. **Candid** – Honest and straightforward
5. **Complacent** – Satisfied with oneself, often without awareness of danger
6. **Diligent** – Hardworking and careful
7. **Elaborate** – Detailed and complicated in design or explanation
8. **Empathize** – To understand and share another's feelings
9. **Feasible** – Possible and practical to do
10. **Fluctuate** – To change irregularly
11. **Gratify** – To please or satisfy
12. **Hinder** – To stop or delay progress
13. **Impartial** – Fair, without bias
14. **Inquisitive** – Eager for knowledge, curious
15. **Jeopardize** – To put at risk or in danger
16. **Lucrative** – Producing a lot of profit
17. **Meticulous** – Very careful and precise
18. **Naive** – Innocent and inexperienced
19. **Persevere** – To keep trying despite difficulty
20. **Pragmatic** – Dealing with things sensibly and realistically
21. **Resilient** – Able to recover quickly from difficulty
22. **Scrutinize** – To examine very closely
23. **Skeptical** – Doubtful, not easily convinced
24. **Subtle** – Not obvious, delicate
25. **Tedious** – Boring and too slow or long
26. **Transient** – Lasting for only a short time
27. **Versatile** – Able to adapt or be used in many ways
28. **Vulnerable** – Open to harm or attack
29. **Wholesome** – Morally or physically good for you
30. **Witty** – Clever and funny in speech or writing

Tasks 1 :

Choose 5–8 words from the vocabulary list and write a short paragraph (100–120 words) on one of the following topics:

- a) *A Moment That Taught Me a Lesson*
- b) *How I Overcame a Challenge*
- c) *A Realistic View of School Life*

Task 2: Word Web

Pick any 5- 7 words and create a word web with:

- Synonym
- Antonym
- Sentence

Task 3: Make a Comic Strip or Storyboard

using 5 or more vocabulary words. Include dialogue, thought bubbles, and meaningful interactions.

ROLL NO :1-8

- A. Prepare a quiz to test the knowledge of the status of women in Turkey on the basis of:
 - I. Women's Rights and challenges
 - II. Government policies and initiatives
 - III. Social and cultural context
- B. Write one quote on women Empowerment on A3 sheet.

ROLL NO : 9-16

Conduct a SWOT ANALYSIS to identify Turkey's security challenges and potential opportunities and show the same on a chart paper.

ROLL NO : 17-24

RESEARCH PAPER

Write a research paper on Turkey 's Security challenges. Include the following

1. Historical context
2. Current challenges
3. Terrorism
4. Cyber security threats
5. Kurdish issues

ROLL NO: 25-32

Which country is more powerful India or Turkey ? Analyse on the basis of ECONOMY, GDP AND MILITARY. Show the same on a chart paper.

ROLL NO : 32 onwards.

Compare the trade of India and Turkey. Show the comparison on a chart paper.



हर्षाति हिंदी

Roll no (1-8)

वेदों का अर्थ, विभिन्न वेदों में निहित शिक्षाप्रद तथ्य एवं अनभिज्ञ (unknown) घटना या प्रसंग (उदाहरण-यम-नचिकेता संवाद) का सचित्र वर्णन परियोजना कार्य के रूप में कीजिए ।

Roll no (9-16)

पौराणिक ग्रंथ भगवद गीता के विभिन्न अध्यायों में से किसी एक अध्याय को आधार बनाकर

उसमें निहित पांच श्लोक को सुंदर लेख में लिखते हुए फ्लैश कार्ड के रूप में प्रस्तुत कीजिए ।

Roll no (17-24)

विज्ञान एवं चिकित्सा क्षेत्र के जो आविष्कार आज प्रचलित और प्रसिद्ध है, वास्तव में उनसे संबंधित कार्य तो पहले ही पौराणिक ग्रंथों में वर्णित किये जा चुके हैं (जैसे रामायण में वर्णित पुष्पक विमान, चिकित्सा क्षेत्र में सुश्रुत द्वारा किए गए आविष्कार आदि) ऐसे ही कुछ कार्यों के बारे में जानकारी संकलित कीजिए और उसे शोध पत्र (research paper) के रूप में प्रस्तुत कीजिए ।

Roll no(15-32)

कल्पना की उड़ान मानव को कहीं भी ले जा सकती है इसी संदर्भ में किसी एक अज्ञात पौराणिक कहानी (untold stories of mythology) का सचित्र वर्णन कीजिए जो रचनाकार की कल्पना तथा मौलिकता का अनूठा समन्वय प्रस्तुत करती हो ।



Roll no(33-40)

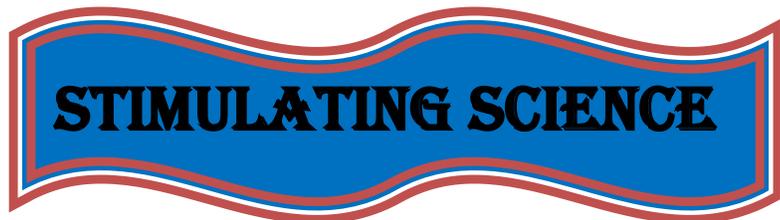
जादुई घटनाएं मनुष्य को विस्मित और रोमांचित कर देती है-संदर्भ में कुछ जादू के खेलों तथा उसमें निहित रहस्य के बारे में जानकारी संकलित कीजिए तथा एक सुंदर पत्रिका के रूप में प्रस्तुत कीजिए ।

इसके अतिरिक्त व्याकरण कार्य पत्रिका (Hindi worksheet) के विभिन्न विषयों के अंतर्गत दिए गए इन पृष्ठों को कीजिए: उपसर्ग (27-30), प्रत्यय (34-36) अपठित गद्यांश (5-11), पत्र लेखन (70,71,72) संवाद लेखन (83,84)

ASSIGNMENT QUESTIONS

1. If $p(x) = x^3 + 3x^2 - 2x + 4$, find the value of $p(-2) + p(1) + p(0)$.
2. If $a + b + c = 6$ and $ab + bc + ca = 11$, find the value of $a^3 + b^3 + c^3 - 3abc$.
3. Using identity, find the product of $(x + 1)(x - 1)(x^2 + 1)(x^4 + 1)$.
4. If $x = 2$ is a root of the polynomial $f(x) = 2x^2 - 3x + 7a$, find the value of a .
5. Rationalize the denominator: $(2\sqrt{3} - \sqrt{5}) / (2\sqrt{2} + 3\sqrt{3})$
6. Evaluate $(11.2)^3$
7. Evaluate $46^3 + 34^3$
8. Find the value of $x^3 + y^3 - 12xy + 64$, when $x + y = -4$.
9. Factorise $(x - 2y)^3 + (2y - 3z)^3 + (3z - x)^3$.
10. Area of rectangle is $(a^3 + b^3 + c^3 - 3abc) \text{ cm}^2$. If one of the side is $(a^2 + b^2 + c^2 - ab - bc - ca) \text{ cm}$. Find the other side.
11. A point lies on the x-axis at a distance of 7 units from the y axis. What are its coordinates? What will be the co-ordinate if it lies on y-axis at a distance of minus 7 units from x-axis?
12. Find the coordinate of a point
 - i) which lies on x and y axis both
 - ii) whose ordinate is -4 and which lies on y axis.
 - iii) whose abscissa is 5 and which lies on x axis.
13. Give two rational numbers line between 0.19 1119119 111119..... and 0.2121211121111.....
14. Represent $\sqrt{11}$ on number line.
15. Represent $\sqrt{6.4}$ on the number line.
16. If $x = 3 + \sqrt{5}$, find the value of $x^2 + 1/x^2$.
17. If $x^2 + 7ax + 40$ and $x^2 + 2ax - 60$ have a common factor, then find the value of a .
18. If $9x^2 + 25y^2 = 181$ and $xy = -6$, find the value of $3x + 5y$.
19. If $x + y = 8$, $xy = 15$, then find the value of $x^4 + x^2y^2 + y^4$.
20. On one day, principal of a particular school visited the classroom. Class teacher was teaching the concept of polynomial to students. He was very much impressed by her way of teaching. To check, whether the students also understand the concept taught by her or not, he asked various questions to students. Some of them are given below. Answer them.

- i) Find the value of a, when $x + 1$ is a factor of $x^3 - 2ax^2 + 16$.
- ii) Find the value of k, when $x - 1$ is a factor of $4x^3 - 3x^2 - 4x + k$.
- iii) How many zeroes are there in the polynomial $x^2 + 4x + 2$.



Digital India – Science for Society/ Health Tech – Science Healing Lives

For Roll Numbers (1-2)

- Prepare a working model on “Water Purification system” using layers of charcoal, sand and gravels.

For Roll Numbers (3-4)

- Design a battery powered jacket that circulates the air inside the fabric to withstand heat stroke and increase productivity.

For Roll Numbers (5-6)

- Make a model of “Air Quality Monitoring Device” using MQ-135 air quality sensor, Arduino, display module.

For Roll Numbers (7-8)

- Create models of virus structures, highlighting their composition and replication mechanisms.

OR

- Create a simulation model to demonstrate how infectious diseases spread through a population.

For Roll Numbers (9-10)

- Make a project file on “How plastic waste can be used as fuel?”

For Roll Numbers (11-12)

- Create a simple pulse oximeter using Arduino or Raspberry Pi to measure oxygen saturation levels in the blood.

For Roll Numbers (13-14)

- Make a “Energy-Efficient Smart Home” model having automatically controls lights and fans using sensors, Arduino/Node MCU, relays.

For Roll Numbers (15-16)

- **Create a simple prosthetic limb using 3D printing or other materials, focusing on functionality and affordability.**

For Roll Numbers (17-18)

- **Make a model of “Solar Desalination Plant” that converts salt water into drinkable water.**

For Roll Numbers (19-20)

- **Develop a 3D model of the human brain to understand its structure and function.**
- or
- **Create a 3D model of the heart showing the flow of oxygenated and deoxygenated blood.**

For Roll Numbers (21-22)

- **Make “Forest Fire Alert System” using temperature sensors, smoke detection devices to identify potential fire risk.**

For Roll Numbers (23-24)

- **Develop a model of digital agriculture, showcasing precision farming techniques, crop monitoring, and farm-to-market platforms.**

For Roll Numbers (25-26)

- **Make an energy efficient model of “Clay Pot Food Cooler” that can be used in rural areas.**

For Roll Numbers (27-28)

- **Create a working model of an artificial kidney, demonstrating its potential to improve the lives of patients with kidney disease.**

For Roll Numbers (29-30)

- **Make a “Smart School Bell System” using Arduino, Real-time clock module, buzzer.**

For Roll Numbers (31-32)

- **Make biodegradable paper with fallen dried leaves without cutting trees.**

For Roll Numbers (33-34)

- **Design a model of an automated irrigation system using sensors and microcontrollers.**

For Roll Numbers (35-36)

- **Create a model to show the blood donation guide.**

For Roll Numbers (37-38)

- **Make an App on “Public Sanitation Feedback System” that allows citizens to report and track complains related to sanitation and cleanliness issues to the local municipal corporation.**

For Roll Numbers (39-40)

- **Design a model showing prevention of soil erosion with the help of cement blankets.**

AIL PROJECTS SUBJECT – SCIENCE

NOTE CAREFULLY

ROLL NUMBER WISE DISTRIBUTION FOR IX—A, C

- *Roll no. 1 to 14 will do Biology project*
- *Roll no. 15 to 28 will do physics project*
- *Roll no. 29 to the last roll will do Chemistry project*

ROLL NUMBER WISE DISTRIBUTION FOR IX—B, D

- *Roll no. 1 to 14 will do Chemistry project*
- *Roll no. 15 to 28 will do Biology project*
- *Roll no. 29 to the last roll will do Physics project*

ROLL NUMBER WISE DISTRIBUTION FOR IX—E, F

- *Roll no. 1 to 14 will do physics project*
- *Roll no. 15 to 28 will do Chemistry project*
- *Roll no. 29 to the last roll will do Biology project*

PHYSICS

- Draw the distance-time and velocity-time graph (using matchsticks, thread or clay) for object at rest, uniform motion and non-uniform motion.

BIOLOGY

- Design a flipbook where each page represents a different part of the cell or a different stage of its function. For example, one page could explain the nucleus and its role in cell control, another could show the mitochondria and its function as the powerhouse, and so on. This can be a detailed, interactive way of understanding cell structure and its different components. Add fun facts and colorful illustrations to make it more engaging.

CHEMISTRY

- to design a molecule museum corner, where each student will exhibit their 3D models of different molecules using colored clay, beads, toothpicks, straws, sticks and grains. Also, they will explain real life use of these molecules.

SIGNIFICANT SOCIAL SCIENCE

Roll No.1-8

- ❖ Narrate your visit to the Historical site and on the basis of your observations prepare with description of the place.

Roll no 9 -16

- ❖ Research work on collection of facts, regarding law cities and forgotten settlements of India.

Roll no 17-24

- ❖ Make a file of 8 to 10 pages. Collect information regarding coins, pottery tools and inscriptions, paste these in your file.

Roll no 25 to 32

- ❖ Visit a museum and collect the information given on display by guide, display in the form of photographs, newspapers, clips etc (avoid pictures with personal presence).

Roll no 33 and above

- ❖ Design fun & information quizzes on Indian archeological monuments and history by state. (25-30 questions).

Note:- Compulsory for all

Project file on Disaster Management (Natural & Man - made, it should be hand written) 10-12 sheets of A4 size.

AMAZING ARTIFICIAL INTELLIGENCE

- **(Roll no. 1 to 15)**

"My Dream Smart Home" Design & Presentation – Students have to Introduce the idea of AI and IoT (Internet of Things) in everyday life. They have to design their "dream smart home."

They need to:

- Draw a detailed layout of their house (indoor and outdoor).
- Identify and list at least 5-7 "smart gadgets" they would like to have in their home (e.g., smart lights, voice assistants, robotic vacuum cleaners, smart security systems, smart kitchen appliances, AI-powered pet feeders).
- For each gadget, explain how AI makes it "smart" and what problems it solves or conveniences it offers.
- Discuss potential challenges or ethical considerations (e.g., privacy, security, over-reliance).

Deliverable:

- A-4 size sheets with a detailed drawing of the smart home.
- A brief written explanation for each smart gadget, focusing on its AI functionality.
- A short paragraph on the pros and cons of living in a smart home.

- **(Roll no. 16 to 30)**

AI in the News: A Current Events Scrapbook/Digital Report -Students have to explore the presence of AI in current events and various industries.

They need to:

- Students collect news articles, magazine clippings, or online news links (with screenshots) about AI. They need to find at least 5-7 different examples of AI being used in the real world.

For each example:

- Briefly summarize the news article.
- Identify the specific AI technology being used (e.g., facial recognition, natural language processing, robotics, machine learning for predictions).
- Discuss the impact of this AI application (positive, negative, or both) on society, the environment, or specific industries.

Deliverables:

- A physical scrapbook or a digital presentation (e.g., Google Slides, PowerPoint) with the collected news items.
- A short analysis for each item as described above.
- A concluding paragraph about their overall thoughts on AI's impact on the world.
- Learning Outcomes: Awareness of AI's diverse applications, understanding societal impact, basic research skills, critical analysis.

• **(Roll no. 30 onwards)**

"My AI-Powered Story" Creative Writing -Students have to write a short story (500-750 words) where AI plays a central role.

The story could be:

- About a day in a future where AI is commonplace.
- About a problem that is solved (or created) by an AI.
- About a human interaction with an AI (e.g., a chatbot, a robot companion).
- They must clearly describe the AI's capabilities and how it functions within the story.

Deliverables:

- The written short story.
- A short reflection at the end of the story explaining which AI concepts they tried to incorporate (e.g., learning, decision-making, natural language understanding).
- Learning Outcomes: Creative application of AI concepts, understanding AI's potential and limitations, developing descriptive writing skills.

ARTISTICARTS

Stone art Candle stand for girls



Stone art Clock for boys



EBSB PROJECT

Dear Students

To celebrate the unity in diversity of our nation **EK BHARAT SHRESHTHA BHARAT (EBSB)** program is launched by CBSE. Its aim is to foster National Integration through linguistic literacy, cultural, sports, tourism and other forms of people to people exchanges. All the states are paired in 16 groups. Pairing state of **Haryana** is **Manipur**.

So your **EBSB** Project work is based on the same. You all will make and maintain a **State project Notebook** as per following instructions:

➤ Title Page

MUKAND LAL PUBLIC SCHOOL, SAROJINI COLONY, YAMUNANAGAR
'EK BHARAT SHRESHTHA BHARAT'

Project
Session 2025-26

Name of Project: _____

Name of Student: _____

Name of Class In charge:

Roll NO. : _____

Ms. _____

Class & Section : _____

Signature of Class In charge : _____



- **Ist Page**
Make a colourful & beautiful map of state Manipur.
- **2nd Page**
Write at least 15 sentences in Manipuri. Write the meaning of these sentences in English or hindi.
Project:
- **Roll number 1 to 20-Decorate The Earthen Pot With Manipuri Paintings**
- **Roll number 21 to 40 -Make a project report (10 - 12 pages) on WORLD'S ONLY FLOATING NATIONAL PARK- KEIBUL LAMJAO NATIONAL PARK situated on the floating Loktak Lake of Manipur.**

