Holiday's Homework (for all subjects) must be submitted on the very first day when the school reopens.
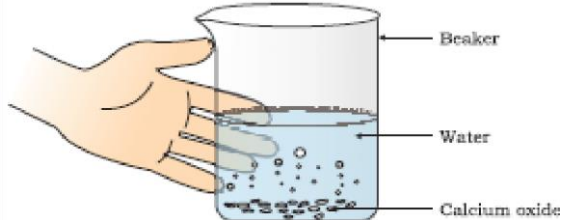
PREFACE

Dear parents and students,

"As the summer break begins, we encourage you to embrace this time as an opportunity for continued learning and growth. This summer homework is designed to reinforce concepts learned throughout the year and to prepare you for the upcoming academic term. It's a chance to explore new ideas, engage with subjects in different ways, and strengthen your understanding. We encourage you to approach these assignments with enthusiasm and a willingness to learn. Parents, your support and encouragement are invaluable in making this a productive and enjoyable summer. If you have any questions or concerns, please don't hesitate to reach out to your teacher or the school administration.
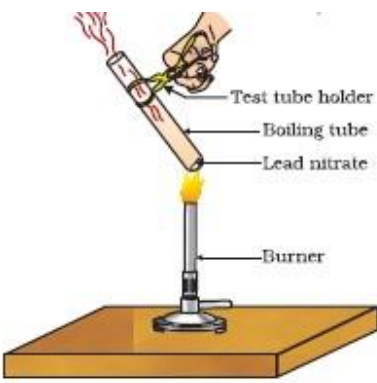
Wishing everyone a safe, fulfilling, and academically enriching summer vacation."

CHEMISTRY(086)

Worksheet : 01

1.	What is the need to balance a chemical equation?
2.	Define Rancidity.
3.	Which one is a chemical change? Electrolysis of water or sodium chloride exposed to sunlight?
4.	Write a balanced chemical equation to represent the following reaction. Carbon monoxide reacts with hydrogen gas at 340 atm. to form methyl alcohol.
5.	White silver chloride turns grey in sunlight. Why?
6.	Why are bags of chips flushed with nitrogen gas?
7.	Which is the brown coloured gas evolved when lead nitrate crystals are heated in a dry test tube?
8.	Write a balanced chemical equation to represent the following reaction: Iron reacts with steam to form Iron (II, III) oxide and hydrogen gas.
9.	Write any one example of an endothermic reaction and exothermic reaction.
10.	

	(a) Write a balanced chemical equation involved in the above reaction. (b) Write one use of the solution of the product formed in the above reaction.
11.	What is the colour of $FeSO_4 . 7H_2O$ crystals? How does this colour change upon heating? Give balanced equation for the changes.
12.	A magnesium ribbon is burnt in oxygen to give a white compound 'X' accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burn and forms a compound 'Y'. (a) Write the chemical formulae of X and Y. (b) Write a balanced chemical equation, when X is dissolved in water.

13.	Observe the following figure and answer the questions.

a) Identify the type of reaction.

b) Write a balanced chemical equation for the reaction.

c) What are the gaseous products formed in this reaction

14.	A substance 'X', which is an oxide of a group 2 element, is used intensively in the cement industry. This element is present in bones also. On treatment with water it forms a solution which turns red litmus blue. Identify 'X' and also write the chemical reactions involved.
15.	What changes do you observe in the iron nails and colour of copper sulphate solution if the iron nails are dipped in $CuSO_4$ solution for 15 minutes?
16.	A shiny brown coloured element 'X' on heating in air becomes black in colour. Name the element 'X' and the black coloured compound formed. Write the chemical equation for the reaction.
17.	A solution of potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed.
	(i) Translate the above statement into a chemical equation. (ii) State two types for this reaction.
18.	Differentiate between photochemical and thermal decomposition reactions.
19.	What is the chemical formula of rust? Give conditions for rusting.
20.	(a) Why do silver articles turn black when kept in the open for a few days? Name the phenomenon involved. (b) Name the black substance formed and give its chemical formula.
21.	An aluminium can is used to store Ferrous sulphate solution. It is observed that in few days holes appeared in the can. Explain the observation and write chemical equation to support your answer.
22.	Respiration is an exothermic reaction. Explain why?

23.	Write a balanced chemical equation for each of the following reactions and also classify them. (a) Lead acetate solution is treated with dilute hydrochloric acid to form lead chloride and acetic acid solution. (b) A piece of sodium metal is added to absolute ethanol to form sodium ethoxide and hydrogen gas.
24.	Aqueous solutions of lead nitrate and potassium iodide are mixed together. What change in colour will you observe? Write balanced equation for the reaction and the type of the reaction.
25.	In the refining of silver, the recovery of silver from silver nitrate solution involves displacement by copper metal. Why? Also write down the reaction involved.
26.	What is Redox reaction? Identify the reducing agent and oxidizing agent in the following reactions. (a) $CuO + H_2 \rightarrow Cu + H_2O$ (b) $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$ (c) $4NH_3 + 5O_2 \rightarrow 4NO + 6H_2O$

Subject: Physics (086)

Art Integration Project(1.1.1)

As per CBSE guidelines, students of Class X have to submit an art integrated project on Physics (Roll no 01-05)

1. Roll: 01 - Solar Energy of Arunachal Pradesh

2. Roll: 02 - Wind Energy of Arunachal Pradesh

3. Roll: 03 - Biomass energy of Arunachal Pradesh

4. Roll: 04 - Hydropower energy of Arunachal Pradesh

5. Roll: 05 - Wind power energy of Arunachal Pradesh

Project should be submitted under the guidelines given below:

Students need to prepare their project on A4 size paper, which should be hand written.

Project should consist of minimum 20 pages.

Following content should be covered in the project

COVER PAGE:

TITLE,

ACKNOWLEDGMENT,

CERTIFICATE,

OVERVIEW,

INDEX,

DESCRIPTION WITH PHOTOGRAPHS & DIAGRAMS,

BIBLIOGRAPHY,

THANK YOU WITH A RELATED SCIENCE QUOTE

Working Model

1. Series and Parallel circuit working model.

2. Electromagnet working model.

3. Conduction of electricity using pencil.

4. Magnetic Swing Model.

5. Ohm's law verification project

6. Simple Pendulum project

7. Electricity generator without battery.

Note: These are for reference only you can choose anyone or any other working model according to your convenience. Everyone has to prepare one working model individually.

Biology(086)

Art integrated Activity l(1.1.1)

As per CBSE guidelines, Students of class X have to submit an Art integrated project on Biology

1.Fruits and Vegetables of Arunachal Pradesh (Roll no.10-11)

2.Bevrages of Arunachal Pradesh (Roll no.12-13)

Project should be submitted on A4 size paper, which should be handwritten.

Following content should be covered in the project.

Coverpage

Title

Acknowledgement

Certificate

Index

Description

Diagram

Bibliography

Thankyou page

Working Model

1.Create a large working model of Human Circulatory system(Heart) (Rollno.10)

2.Create a working model of Human Respiratory system (Roll no.11)

3.Create a large 3d model showing Human Digestive System (Rollno.12)

4.Create a large 3d model showing Human Brain.(Rollno.13)

ENGLISH (184)

- **Revise all the chapters done in the class.**
- **Make a neat and clean Project.**
  Project work: Topics
  Roll No.(01-03) FORM THE DIARY OF ANNE FRANK
  Roll No. (04-06) GLIMPSES OF INDIA
  Roll No. (07-10) THE SERMON AT BENARAS
  Roll No. (11-13) ROBERT FROST

  NOTE: Project File must contain :

  •**Front Page**

  •**Acknowledgement**

  •**Certificate**

  •**Index**

  •**About Author/Poet(Introduction)**

  •**Theme**

  •**Central Idea**

  •**Summary**

  •**Conclusions**

   •**Bibliography**

Q.2 Watch at least any two movies and summarise in your own words .you may

look at the following list for ideas:

1.BHARAT EK KHOJ

2. PHULE

2.GRAVITY

ART INTEGRATION: 1.1.8. Study and use of various media and techniques to the extent of their availability.

THEME: GLIMPSES OF ARUNACHAL PRADESH

Dance, festivals, clothing, food, monuments and languages.

MATHS(041)

Worksheet

(Do this worksheet on A4 sheets)

Chapter:- Polynomials, Real numbers and Linear equations in two Variables

Q1. Find the Zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients:-

a) $2\sqrt{2}x^2-9x+5\sqrt{2}$

b) $3\sqrt{3}x^2-19x+10\sqrt{3}$

c) x^2-x-72

d) x^2-2

Q2. Form the Quadratic polynomials whose zeros are:-

a) $3\pm\sqrt{2}$

b) $-\sqrt{2}$ and $\sqrt{2}$

c) 3 and 4

Q3. Find the values of a and b, if 2 and 3 are zeroes of $x^3 + ax^2 + bx-30$.

Q4. Find the value of k if 2 is zero of $3x^2-17x+k$.

Q5. If a and b are the zeroes of x^2+5x+6 find the value of $1/a+ 1/b$.

Q6. Prove that $\sqrt{7}$ is irrational.

Q7. Find the LCM and HCF of 51, 85 and 153.

Q8. Find the largest number which exactly divides 875cm , 675cm and 750cm.

Q9. Prove that $\sqrt{3} + \sqrt{5}$ is irrational.

Q10. Show that $7\times 9\times 11\times 15 + 11$ and $17\times 5\times 9 \times 23 + 17$ is a composite number.

Q11. Solve the following pair of linear equations.

- $ax + by = a^2 + b^2$, $bx – ay = 0$
- $53x + 65y = - 12$, $65x + 53y = 12$
- $3x/2 + 2y/3 = 2$, $3x/4 - 5x /3 = 13/6$

Q12. The pair of equations $\lambda x + 3y = -7$ and $2x + 6y = 14$ to have infinitely many solutions, then find the value of λ.

Q13. Two years ago, Salim was thrice as old as his daughter and six years later, he will be four years older than twice her age. How old are they now?

Q14. A two-digit number is obtained by either multiplying the sum of the digits by 8 and then subtracting 5 or by multiplying the difference of the digits by 16 and then adding 3. Find the number.

Q15. A railway half ticket costs half the full fare, but the reservation charges are the same on a half ticket as on a full ticket. One reserved first class ticket from the stations. A to 8 costs ₹2530. Also, one reserved first class ticket and one reserved first class half ticket from A to 8 costs ₹3810. Find the full first class fare from station A to 8 and also the reservation charges for a ticket.
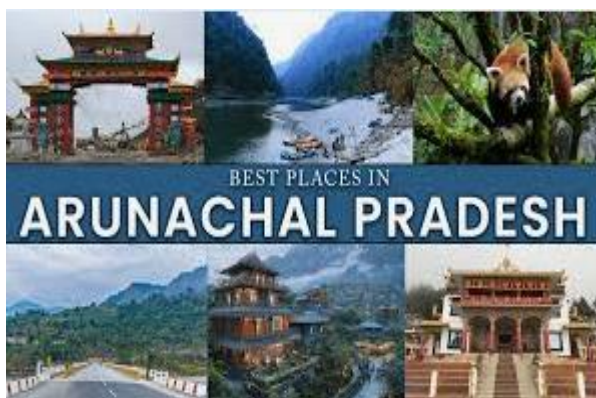
Art Integrated Activity

Choose a motivational **quote about mathematics** (e.g., "Without mathematics, there's nothing you can do." – Shakuntala Devi).

- Create a **poster (**on A3 sheet) around it using maths symbols and shapes.

- Include a **mini biography** of the mathematician and one topic from the syllabus they relate to.

ARTIFICIAL INTELLIGENCE (417)

<u>Objective</u>: To enhance understanding of AI concepts through research, application creativity and practical learning during the holidays.

Research & Theory Based Tasks

1. What is Artificial Intelligence?
Define AI and explain its types with real-life examples.
2. List and explain the 3 domains of AI.
3. What are the ethical concerns of using AI in real life?
Write about bias, privacy, job loss, etc.

Practical/Activity Based

4. Create an AI awareness poster or infographic using Canva, MS Word or any design tool.
Topic ideas:
"AI in Everyday Life" (Roll No. 1-10)
"How Safe is AI?" (Roll No. 11-20)
"Future with AI" (Roll No. 21-29)
5. Write any minimum 15 programs using PYTHON.

Art Integrated Activity (1.1.12)

❖ ***Make a Power Point Presentation on History, Climate, Languages, Costumes, festivals, Agriculture and Cultural life of Arunachal Pradesh.***

Submission Guidelines:

❖ ***Submit your work in a project file with diagrams, explanations, and examples to make your work attractive.***

❖ ***Screenshots of digital work should be printed and attached to your file.***

❖ ***Creativity, neatness, and originality will be appreciated.***

Social Studies (087)

1) Revise and learn all work of Geography and Economics done in the class

2)Make 20 MCQ's of each chapter on your own and write it in your respective notebooks

3)Art Integrated Project(1.1.1)

Prepare a detailed project on the following:

Sustainable Development

(a)Meaning Sustainable Development

(b)Issue of sustainable Development

(c) Importance of Sustainable Development.

(d)Meetings/reports/ summit related to Sustainable Development.

(e)Current Status of development.

Project should be developed and presented in this order:

(a)Cover Page (showing project title, school name, students name, class. etc

(b)List of Content with page number (index)

(c) Project overview, Purpose, aim, experience while doing the project.

(d) Chapters with relevant headings.

(e) Summary Conclusions based on findings.

(f) Bibliography.

(g) Teachers evaluation report.

Holiday home work

National movement in India

Non cooperation movement

Swadeshi movement

Khilafat movement

Rowlatt act

Jallianwala Bagh incident

Quit India movement

Art integration . prepare a file on the topic federalism in India.

हिंदी (002)

कला एकीकरण 1.1.1

अरुणाचल प्रदेश के भोजन पहनावे भाषा संस्कृति त्योहार पर फाइल तैयार कीजिए।

परियोजना कार्य

भक्ति कालीन लेखक तुलसीदास और सूरदास के जीवन परिचय एवं कृतियों पर परियोजना कार्य कीजिए ।(रोल नंबर 1 से 7 तक)

भक्ति कालीन लेखक कबीर दास और मीराबाई के जीवन परिचय एवं कृतियों पर परियोजना कार्य कीजिए। (रोल नंबर 8 से 13तक)

1 माता का आंचल नामक पाठ का   अपने शब्दों में सारांश लिखिए।

2 अनुच्छेद लिखें -

1इंटरनेट :एक संचार क्रांति

2नैतिक शिक्षा की आवश्यकता

3 जन्मदिवस शुभकामना पर संदेश लिखिए।

दिवाली की शुभकामना पर संदेश लिखिए।

4 एक - एक औपचारिक और अनौपचारिक पत्र लिखिए।