SANMATI H. S. SCHOOL
SUMMER ASSIGNMENT

Points to remember

- Summer Vacation is probably the best time of the year for you all;
- it’s time for loads of fun, though we can't go out but getting pampered to no end and of course bonding with distant cousins can be done virtually.
- School is fun too, with learning happening at all times, summer vacation can also be a time for learning with lots of activities around.
- Here are a few tasks for you to complete during the vacation. Do remember to complete the given tasks after reading them carefully.

English Summer Assignment

"Summertime, and the reading is easy..." — Michael Dirda

- The holiday homework will be considered as your English Project work.
- The Project work will carry 10 marks.
- The Project work will be done in a file (plastic strip file with A4sheet may also be used)
- On page 1: write – English Project work , name class , roll number, Topic
- Last page of the project will carry the following certificate
- This is to certify that -------- of class have done this English project work on my own . It is my own original work as per the guidelines provided by the teacher. Signature , Name.

English Summer Assignment

"Summertime, and the reading is easy…" — Michael Dirda

- 📚 Comic Book Presentation Plan
- 🔹 Step 1: Choose a Topic Pick a prose or poem from either First Flight or Footprints Without Feet.
- Here are some popular choices:
- Dust of Snow (Poem – Robert Frost)
- A Letter to God
- Nelson Mandela: Long Walk to Freedom
- The Thief's Story
- Suggestion: Dust of Snow is short and easy to convert into a comic strip. Plus, it gives you room to get creative by adding characters or a twist.
- 🔹 Step 2: Develop Your Comic Book Storyline If you choose Dust of Snow, here's a quick comic outline idea:
- 🖼️ Title: "The Snow That Changed the Day"
- Scene 1: A gloomy man walking in a park on a snowy day, looking upset.

English Summer Assignment

"Summertime, and the reading is easy…" — Michael Dirda

- Scene 2: A crow sits on a hemlock tree, observing the man.
- Scene 3: The crow shakes the snow off the tree, it falls on the man.
- Scene 4: He suddenly smiles, remembering a funny moment with a friend. Scene
- 5: The man sees someone sitting alone, he goes to cheer them up.
- Scene 6: A new ending — He helps a friend who was facing depression, and they walk away together, smiling.
- Final Panel: The crow winks. Caption: "Sometimes, a little snow can change everything." You can make this in Canva using its Comic Strip templates and illustrations.

English Summer Assignment

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2. A Letter to God

- Add a scene where **Lencho meets the postmaster** later and realizes the truth.
- Imagine **Lencho actually receiving money from "God"** (a twist).
- Add a new character like a **curious child** watching Lencho and learning a lesson.

3. The Thief's Story (Footprints Without Feet)

- Add a flashback of the thief's **past life** and why he started stealing.
- Create a new character—a **detective** trying to catch him, who sees his change of heart.
- Let the story end with the thief **becoming a teacher or writer**.

English Summer Assignment

"Summertime, and the reading is easy…" — Michael Dirda

- Words and Expressions Book (Unit 1–4) Make sure you complete all the exercises in your notebook:
- Vocabulary Grammar
- Writing practice
- Reading comprehension passages
- ✉ Letter of Enquiry Write a formal letter in your Fair Notebook.

MATHEMATICS SUMMER ASSIGNMENT

“The only way to learn mathematics is to mathematics”

1. A car travels at a speed of 60 km/h for t hours. If the same distance is travelled at 80 km/h, it takes 1 hour less. Write the linear equation to find the time taken.
2. The perimeter of a rectangle is 50 cm. If the length is 3 cm more than the breadth, find the dimensions of the rectangle.
3. Two numbers have a sum of 36 and a difference of 8. Find the numbers using linear equations.
4. The sum of the ages of two brothers is 30 years. Four years ago, the elder brother was three times as old as the younger one. Find their current ages.
5. A school sells pens for ₹15 each and notebooks for ₹25 each. If 3 pens and 4 notebooks cost ₹105, find the cost of each item using a linear equation.

MATHEMATICS SUMMER ASSIGNMENT

"The only way to learn mathematics is to mathematics"

5. A school sells pens for ₹15 each and notebooks for ₹25 each. If 3 pens and 4 notebooks cost ₹105, find the cost of each item using a linear equation.

6. A train covers 300 km in 5 hours. If the speed of the train is increased by 10 km/h, it would cover the same distance in 4 hours. Write and solve the linear equation to find the original speed.

7. A shopkeeper sells 5 pencils and 3 erasers for ₹40, and 2 pencils and 4 erasers for ₹26. Find the cost of one pencil and one eraser.

8. Solve the following system of equations by substitution method:

- **$2x + 3y = 0$ and $3x + 4y = 5$**

MATHEMATICS SUMMER ASSIGNMENT

"The only way to learn mathematics is to mathematics"

9. Find the value of k for which the given system of equations has infinitely many solutions: x + (k + 1)y = 5 and (k + 1)x + 9y + (1 – 8k) = 0.

10. If the lines given by 3x + 2ky = 2 and 2x + 5y + 1 = 0 are parallel. Find the value of k.

11. Find the value of k for which the system of equations has a non-zero solution

5x + 3y = 0 and 10x + ky = 0

12. The monthly incomes of A and B are in the ratio 8:7 and their expenditures are in the ratio 19:16. If each saves ₹ 5000 per month, find the monthly income of each.

MATHEMATICS SUMMER ASSIGNMENT

"The only way to learn mathematics is to mathematics"

13. The sum of a two-digit number obtained by reversing the order of its digits is 99. If the digits differ by 3, find the original number.

14. A man's age is three times the sum of the ages of his two sons. After 5 years, his age will be twice the sum of his two son's age. Find the age of the man.

15. A man can row downstream 20 km in 2 hours, and upstream 4 km in 2 hours, Find his speed of rowing in still water. Also, find the speed of the stream.

MATHEMATICS SUMMER ASSIGNMENT

"The only way to learn mathematics is to mathematics"

16. Find the four angles of a cyclic Quadrilateral ABCD in which $\angle A = (2x - 1)^o$, $\angle B = (y + 5)^o$, $\angle C = (2y + 15)^o$, and $\angle D = (4x - 7)^o$.

17. Find the roots of quadratic equations by factorisation:

(i) $\sqrt{2}\,x^2 + 7x + 5\sqrt{2} = 0$

(ii) $100x^2 - 20x + 1 = 0$

18. Find two consecutive positive integers, the sum of whose squares is 365.

19. The diagonal of a rectangular field is 60 metres more than the shorter side. If the longer side is 30 metres more than the shorter side, find the sides of the field.

MATHEMATICS SUMMER ASSIGNMENT

"The only way to learn mathematics is to mathematics"

20. Solve the quadratic equation $2x^2 - 7x + 3 = 0$ by using quadratic formula.

21. The sum of the areas of two squares is 468 m^2. If the difference of their perimeters is 24 m, find the sides of the two squares.

22. Find the values of k for each of the following quadratic equations, so that they have two equal roots.

(i) $2x^2 + kx + 3 = 0$

(ii) $kx\,(x - 2) + 6 = 0$

23. Is it possible to design a rectangular park of perimeter 80 and area 400 sq.m.? If so find its length and breadth.

MATHEMATICS SUMMER ASSIGNMENT

"The only way to learn mathematics is to mathematics"

1. **Activity 1 : To verify the consistency for a pair of linear equations in 2 variables Check the following pair's consistency Graphically (use threads to make lines and pins to locate points on graph and paste it in a sheet)**

Find their solutions also.

(i) X + y = 4

2x + 3y = 6

(ii) X – y = 2

- **4x + 2y = 8**

ग्रीष्मकालीन अभिहस्तांकन 2025-26

कक्षा - 10वीं विषय - हिन्दी

- पूर्णांक **20**
- 1.मुहावरों का प्रयोग करते हुए एक ऐसी मौलिक कहानी लिखिए जिसके अंत में नीचे लिखे गए वाक्य में से कोई एक वाक्य लिखा गया हो-(सचित्र)
- • 'कुछ भी करने से पहले की समस्त परिणामों पर सोच - विचार करके ही कार्यकरना चाहिए'
- • अंततः मेरी जीत हुई
- • काश मैंने भी एक पेड़लगाया होता

- (लेखन कौशल)
- 2. अपना परिचय देते हुए एक समाचार वाचक की तरह नीचे लिखे गए विषयों में से किसी एक विषय पर समाचार प्रस्तुत करते हुए 4 से 5 मिनट की अपनी वीडियो बनाओ ।अपनी प्रस्तुतिको प्रभावशाली बनाने के लिए आप समाचार से संबंधित चित्र भी दिखा सकते हैं।

ग्रीष्मकालीन अभिहस्तांकन 2025-26
कक्षा - 10वीं विषय - हिन्दी

- अथवा
- So sorry की तरह अपने पसंदीदा गाने पर किसी सामाजिक बुराई से जन जागरूकता के लिए पैरोडी बनाकर प्रस्तुत करें।
- विषय :-
- • पर्यावरण का असंतुलन
- • डिग्री के साथ-साथ सॉफ्ट स्किल भी
- • अहंकार अज्ञानता का सूचक
- • समय नियोजन
- (अभिव्यक्तिकौशल और प्रस्तुतिकौशल)
- 3. नवीन शिक्षा प्रणाली कला समेकित शिक्षा (Art Integration learning) हमारे जीवन में महत्वपूर्णहै।इस नवीन शिक्षा प्रणाली को लागू करने के लिए शिक्षा अधिकारी को एक धन्यवाद पत्र लिखिए।
- 4. ग्रीष्मकालीन अवकाश में आपके द्वारा किए गए कार्यको अपनी दैनंदिनी (डायरी) में लिखिए और आत्म विश्लेषण कीजिए।

Physics Summer Assignment

"Everything happens for a reason the reason is usually Physics "

Class 10 Summer Vacation Assignment
Physics – Chapter 1: Light – Reflection and Refraction

- **Part A: Investigative Project (Choose any ONE)**
- DIY Periscope or Kaleidoscope
- Objective: To understand the laws of reflection practically.
- Materials: Cardboard box, mirrors, glue, scissors.
- Task:
- Make a working model of a periscope or kaleidoscope.
- Explain how light reflects inside the device.
- Create a 1-page write-up with diagrams showing how reflection is used in your model.

Physics Summer Assignment

"Everything happens for a reason the reason is usually Physics "

- Refraction through Lenses – Simple Experiments at Home
- Objective: To investigate real and apparent depth, bending of light, and lens behavior.
- Materials: Glass of water, pencil/straw, magnifying glass or old lenses.
- Task:
- Perform at least 3 simple refraction experiments.
- Take photos, describe observations, and explain with ray diagrams.
- Include terms like angle of incidence, refraction, real and apparent depth.

Physics Summer Assignment

"Everything happens for a reason the reason is usually Physics "

- **Part B: Artistic Integration**
- Light and Art – Drawing with Physics
- Make a Poster / Creative Chart on any ONE of the following themes:
- "Journey of a Light Ray"
- "Mirror vs Lens – Spot the Differences"
- "Applications of Reflection and Refraction in Daily Life"
- Use diagrams, colors, and labeled illustrations.
- Make it visually appealing and informative.

Physics Summer Assignment

"Everything happens for a reason the reason is usually Physics "

- **Part C: Research & Real-World Application**
- Mini Research Report (1-2 pages)
- Choose one real-life application of reflection/refraction and explain:
- **How physics is used in it**
- Related laws (with labeled diagrams)
- Examples from daily life or technology
- Topics (Choose any ONE):
- Optical fibers
- Car mirrors (concave/convex usage)
- Lenses in spectacles/cameras
- Mirage and its science

Physics Summer Assignment

"Everything happens for a reason the reason is usually Physics "

- **Part D: Concept Revision (Worksheet)**
- Complete the following:
- Draw and label ray diagrams for:
- **Concave mirror:** Object at different positions
- **Convex lens:** Object at F and 2F
- Solve numericals based on mirror and lens formulas (5 each).
- Revise and write all important formulae and sign conventions in a creative format (mind map, flowchart, etc.)
- **Instructions:**
- Work should be compiled in a folder or scrapbook.
- Creativity, neatness, and originality will be appreciated.
- Marks will be awarded for presentation, concept understanding, and effort.

Biology Summer Assignment

"Biology gives you a brain . Life turns it into a mind."

- ***LAB MANUAL***

1. Preparing a temporary mount of a leaf peel to show stomata.
2. Experimentally show that Carbon-di-oxide is given out during respiration.
3. Studying (a) binary fission in Amoeba and (b) budding in yeast and Hydra with the help of prepared slides.
4. Identification of the different parts of an embryo of a dicot seed (Peas, gram or red kidney bean).

- ***MODEL PREPARATION***: -

1. Digestive system, Respiratory system, circulatory system, excretory system. (any one)

Chemistry Summer Assignment

"Think like a Proton always positive"

Note: Write the following practicals in your lab manual (Practical File)

1. **A. Finding the pH of the following samples by using pH paper/universal indicator:**

(i) Dilute hydrochloric acid
(ii) Dilute NaOH solution
(iii) Dilute ethanoic acid solution
(iv) Lemon juice
(v) Water
(vi) Dilute hydrogen carbonate solution

B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with:

a) Litmus solution (Blue/red) b) Zinc metal c) Solid sodium carbonate

Chemistry Summer Assignment

"Think like a Proton always positive"

2. Performing and observing the following reactions and classify them into:

A. Combination reaction

B. Decomposition reaction

C. Displacement reaction

D. Double displacement reaction

(i) Action of water on quicklime

(ii) Action of heat on ferrous sulphate crystals

(iii) Iron nails kept in copper sulphate solution

(iv) Reaction between sodium sulphate and barium chloride solutions

3.

Chemistry Summer Assignment

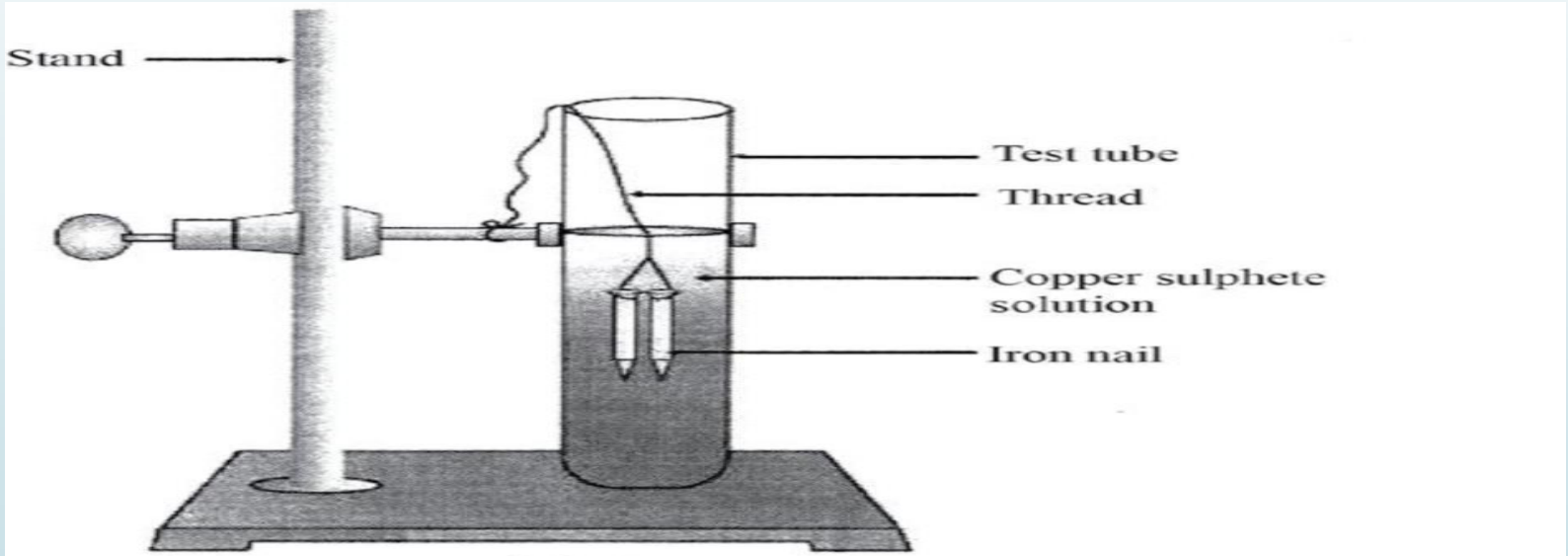
"Think like a Proton always positive"

- 3. **Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions:**
- i) $ZnSO_4(aq)$
- ii) $FeSO_4(aq)$
- iii) $CuSO_4(aq)$
- iv) $Al_2(SO_4)_3(aq)$
- Arranging Zn, Fe, Cu and Al (metals) in decreasing order of reactivity based on the above result.
- **4. Study of the following properties of acetic acid (ethanoic acid):**
- i) Odour
- ii) Solubility in water
- iii) Effect on litmus iv) Reaction with sodium hydrogen carbonate
- **5. Study of the comparative cleaning capacity of a sample of soap in soft and hard water.**

Chemistry Summer Assignment

"Think like a Proton always positive"

- **Worksheet**
- Q. Observe the diagram given below carefully and answer the following questions:



(a) Iron, nails dipped in copper sitiphate solution

Chemistry Summer Assignment

"Think like a Proton always positive"

- Ql. After ten minutes of keeping the set up as shown in the figure, the colour of the iron
- nail changes, what does this indicate?
- Q2. Name the type of chemical reaction that takes place between copper sulphate and iron
- nail.
- Q3. Which of the two metals involved in the given process is more reactive?
- Q4. What change do you expect in the reaction mixture if a copper wire is kept immersed
- in an iron sulphate solution?
- Q5. Write a balanced chemical equation for the reaction, between copper sulphate and iron
- nail.

AI SUMMER ASSIGNMENT

"Predicting the future isn't magic , it's artificial intelligence"

Topic: Using Artificial Intelligence to Reduce Food Waste in School Canteens

Assignment Instructions:

1. Problem Scoping

- Identify the problem: Food wastage in school canteens.

- Why is it a problem?

- Who are the stakeholders? (canteen staff, students, school management)

- What outcomes do you expect? (Less wastage, cost-saving, better planning)

AI SUMMER ASSIGNMENT

"Predicting the future isn't magic , it's artificial intelligence"

- **2. Data Acquisition:**
- - What kind of data is needed?
- (daily consumption, leftovers, menu items, number of students present)
- - How will you collect it?
- (surveys, observation, school records, interviews)

3. Data Exploration:

- Analyze the data collected.

- Which items are wasted the most?

- Which days have the highest/lowest consumption?

- Are there patterns in wastage?

AI SUMMER ASSIGNMENT

"Predicting the future isn't magic , it's artificial intelligence"

4. Modelling:

- Propose an AI-based solution:

5. Evaluation:

- How will you know your solution is working?
- Compare wastage before and after implementation.
- Get feedback from stakeholders.

Deliverables:

- A report or presentation including all 5 phases.

- Use charts, tables, and visuals for better understanding.

- Reflect on how AI helped and what improvements can be made.