LITTLE FAIRY PUBLIC SCHOOL

HOLIDAYS HOMEWORK   (2024-25)

CLASS – 10th

Summer Vacations will commence from 21May, 2024 to 30th June, 2024.

The school will reopen from 1st July,2024 (Monday)

Holiday homework is an attempt to channelize the creative energy , it keeps you connected with the syllabus. Doing it in the right- spirit with enthusiasm will make it a great learning experience

General Instructions :

1. *Revise all the work done in the class .*
2. *Make sure that your work is neat, presentable, and original and conforms to the guidelines.*
3. *Engage yourselves in morning walks, yoga, exercise, meditation with your parents or grandparents.*

Do the given homework as directed by the teachers

ENGLISH

* Need to do all questions in Assignment Book.

* -Analytical Paragraph Writing(Based on Clue/s)

  -Assignments-6,7,8,9(page number B1- 36 to38)

* Analytical Paragraph Writing -Assignment 1 ,2 ,3 ,4,5(page number B1– 30 to 34)

* Letter to Editor- Assignment -1,2,3,4,5 (Page no B1-5 to9)

* Discursive Unseen Passage - Assignment 1,2,3,4 (Page No A8 to A14)

* Factual Unseen Passage -Assignment 1,2,3,4 (Page No A25 to A32)

* The Students are directed to read newspapers and magazines daily and update themselves with the current affairs.

* Maintain a personal diary and write three new words with meanings everyday along with current affairs.

* 1. You have just read two of the poems of Robert Frost. Make a detailed project on this American poet highlighting the following topics –

    a. Biography   b. Work   c. Awards and recognition   d. Legacy and Cultural Influence

  2. Read any five stories (apart from stories in your text) and write a critical appreciation of the same in about 250 – 300 words. (Note: Both these tasks are to be submitted in a stick file)

Hindi:

ग्रीष्मावकाश कार्य

1) अंडमान निकोबार लक्ष्यदीप की आर्थिक स्थिति का वर्णन करते हुए वहां के पर्यटन स्थलों का चित्र सहित व्याख्यान कीजिए।

2) अधिक से अधिक मुहावरों का प्रयोग करते हुए एक कहानी लिखें।

3) रविंद्र नाथ टैगोर के द्वारा निर्मित शांतिनिकेतन का पूरा विवरण चित्र सहित दीजिए।

4) अपनी हिंदी की व्याकरण की पुस्तक में समास तथा मुहावरे सन से संबंधित अभ्यास कार्य को पूरा करें। तथा बड़े भाई साहब और डायरी का पन्ना पाठ में से मुहावरे छाँटे और उनके अर्थ लिखे।

5) मध्य प्रदेश की वन संपदा पर अपनी लेखन पुस्तिका में लेख लिखें । (शब्द सीमा 1000 शब्द)

MATHEMATICS
1.Real-Life Applications Investigation:
   -Select a mathematical concept studied this year (e.g., trigonometry, probability, quadratic equations).
   -Research and discover at least three real-life applications of this concept across different fields (e.g., engineering, economics, astronomy).
   -Present your findings creatively, such as through a poster, presentation, or short video, highlighting the significance of the concept in each application.

2.Problem-Solving Marathon:
   -Complete the attached problem-solving worksheets covering various topics from this academic year.
   -Ensure to show detailed step-by-step solutions and explanations for each problem.
   -Challenge yourself with additional problem sets or online quizzes to strengthen your problem-solving skills.
3.Mathematical Games and Challenges:
   -Engage in mathematical games and challenges to keep your mind sharp.
   -Choose at least two games or puzzles from the provided list (e.g., KenKen puzzles, mathematical riddles) and solve them during your leisure time.
   -Share your strategies and solutions with your peers when school resumes.

4.Artistic Expression of Mathematics:
   -Express your understanding of mathematical concepts through art.
   -Create a piece of mathematical art using geometric shapes, tessellations, or mathematical patterns.
   -Reflect on how mathematical principles influenced your artistic choices and the creative process.

5.Self-Assessment and Goal Setting:
-Complete the self-assessment questionnaire provided.
-Reflect on your strengths, weaknesses, and areas for growth in mathematics.
-Set SMART goals for the upcoming academic term and outline actionable steps to achieve them.

SCIENCE
INSTRUCTIONS:

 This work is be done for **Portfolio** on ruled sheets :

1. Describe any two innovative ideas which you explored during vacations that could help society to overcome several issues related to environment, transport,buying commodities etc. in a scientific manner. **The report must include :**
    a) Name of ideas or research
    b) Brief explanation of the idea
    c) Applicability in real life
    d) Diagram (if any).
2. Write any five balanced chemical reactions that you have observed in your home and mention the type of reaction.
3. Write a comparative report on any two similar viral diseases that became epidemic in the past. Differentiate them on the basis of :
    • Origination (Whether originated in birds/animals/humans)
    • Their structure

- Mode of transmission
- Organ/Organs they affected
- Symptoms produced.
- Vaccines/Drugs available in the market
- Future threats
- Measures suggested or applied in past to control these infections.

SOCIAL SCIENCE

1.Make a project on Consumer awareness on A3 size pages upto 8 pages.

2.Show all the types of soil in political map of India and paste them in your school notebook.

3.Prepare an informative report on Arunachal Pradesh of India in 4 pages.

   a. Cuisine

   b. Traditional dress

   c. Heritage

   d. Jewellery

INFORMATION TECHNOLOGY

PART-B UNIT -1

DIGITAL DOCUMENTATION

ACTIVITY

Do it practically and submit soft copy as well as hard copy of the same

 1. Write your resume/ Bio Data and apply different styles on it,

                  OR

   Create a pamphlet on Cyber Awareness.

       (Apply different styles on it)

 2. Create a New Year card using images OR Create a Poster on Health and Hygiene

3. Create your own template for any topic of: Heritage of India-"Andaman & Nicobar Islands". and gather the information about this site.

4. Do the following question answers in IT note book

   i.What are templates? What are the advantages of using templates?

   ii. What is the difference between styles and templates?

   iii. Explain any four Graphic filters.

   iv. Explain Image Cropping

   v. List any three methods of inserting images in a text document.

   vi. What do you understand by the terms: a. Text Wrapping b. Anchoring

Instructions for file:

 1. Take portfolio folder.

2. Prepare a title page including school name, your name and class & section.

 3. Insert an acknowledgement page.

4. Write the steps and paste screenshots for each activity on a separate page

REAL NUMBERS

1. Using Euclid's division algorithm, find the HCF of:

(i) 210 and 55   (ii) 117 and 65   (iii) 240 and 1024

(iv) 391 and 425   (v) 1288 and 575   (vi) 155 and 1385

2. A merchant has 105 litres of oil of one kind, 140 litres of second kind and 175 litres of third kind. He wants to sell the oil by filling the three kinds of oil in tins of equal capacity. What should be the greatest capacity of such tin? is divisible by 3, where n is any positive number

3. Show that one and only one out of n , or n+2 n +4 are integer.

4. Express each of the following integers as the product of its prime factors:

(i) 60   (ii) 1386   (iii) 6435   (iv) 2184   (v) 8085   (vi) 14850

5. Find LCM and HCF of the following pairs of integers and verify that LCM ×HCF = Product of integers:

(i) 63 and 168   (ii) 144 and 160   (iii) 510 and 92   (iv) 252 and 488

6. Find LCM and HCF of the following pairs of integers by applying prime factorization method:

(i) 12, 15 and 21   (ii) 15, 24 and 36   (iii) 225, 336 and 360   (iv) 240, 1024 and 1536

7. The HCF and LCM of two numbers are 145 and 2175 respectively. If one of these numbers is 725, find the other number.

8. The product of two numbers is 20736 and their HCF is 54. Find their LCM.

9. The LCM of two numbers is 192 and their product is 3072. Find their HCF.

10. Show that the following numbers are irrational:

i) $\sqrt{5}$ (ii) $2+\sqrt{3}$ (iii) 4- $\sqrt{5}$ (iv) 3 $\sqrt{5}$

(v) $\sqrt{2+}$ $\sqrt{3}$ (vi) 2+ 3 $\sqrt{5}$ (vii) 3- 5 $\sqrt{2}$ (viii) $\frac{1}{\sqrt{2}}$

11. Without actually performing the long division, state whether the following rational number will have terminating decimal expansion or a non-terminating repeating decimal expansion:

(i) 13 /121   (ii) 57/ 128   (iii) 19/ 45   (iv) 108 /250   (v) 113 /175   (vi) 517/ 2000

12. Write down the decimal expansions of the following rational numbers by writing their denominators in the form 2^mx 5^n where , m and n are non-negative integers.

(i) 5/ 8   (ii) 17/ 125   (iii) 13/ 80   (iv) 123/ 625   (v) 7014 /400   (vi) 17 /2000

Graphical Method

1. Draw the graph of equation $2y - x = 7$ and determine from the graph whether $x = 3$, $y = 2$ is a solution or not?

2. Solve graphically the following system of linear equations:

(a) $x + 2y - 3 = 0$; $4x + 3y = 2$ (b) $3x + y = 1$; $2y = 2 - 6x$

(c) $2x - y = 2$; $2y - 4x = 2$ (d) $4x - y = 4$; $4x + y =$

3. Determine graphically the vertices of a triangle whose sides are:

(a) $3x - y = 7$; $4x - 5y = 2$; $x = -2$ (b) $2x = y - 3$; $x + y = 3$; $y = 5$

(c) $x - 2y + 8 = 0$; $5y - x - 14 = 0$; $2x - y + 1 = 0$ (d) $2y - x = 8$; $5y - x = 14$; $y - 2x = 1$

4. Solve graphically the following system of linear equations: $x + 2y - 7 = 0$; $2x - y + 1 = 0$. Also, find the co-ordinates of the points where the lines meet the y-axis.

5. Solve graphically the following system of linear equations: $2x + y = 6$; $x - 2y = -2$. Also, find the co-ordinates of the points where the lines meet the x-axis.

6. Draw the graphs of the following equations on the same graph paper: $3x - 2y = 6$; $3x + y = 15$. Find the co-ordinates of the vertices of a triangle formed by the two lines and x-axis.

7. Draw the graphs of the following equations on the same graph paper: $2x + 3y - 12 = 0$; $x - y - 1 = 0$. Find the co-ordinates of the vertices of a triangle formed by the two lines and y-axis.

Algebraic Method

8. Solve the following equations by substitution method:

(a) $3x + 11y = 13$; $8x + 13y = 2$ (b) $x + 2y = 1.6$; $2x + y = 1.4$

(c) $12x - 16y = 20$; $6y + 8x = 30$ (d) $8x - 5y + 40 = 0$; $7x - 2y = 0$

9. Solve the following equations by equating the coefficient method(Elimination method):

(a) $2x + 3y = 28$; $3x - 4y = -9$ (b) $28x - 15y = 41$; $21x + 13y = 55$

(c) $6x + 7y = 32$; $y = 29 - 9x$ (d) $2x + 0.4y = 1.2$; $3.4x - 0.02y = 0.01$

10. Solve the following system of equations:

(a) $129x + 48y = 483$; $48x + 129y = 402$

(b) $53x + 47y = 271$; $47x + 53y = 229$

(c) $4x + 6 = 15$; $3x - 4 = 7$

(d) $1 \_ 1 = -1$; $1 + 1 = 8$ y   y   2x   y   x   2y

ASSIGNMENTS: SCIENCE

Dear Students

Kindly read thoroughly the chapters before solving the assignments

<mark>Chemical Reactions and Equations</mark>

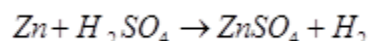**1. Define Rusting. Why do you apply paint an iron articles?**

2. Write the balanced reactions for the following

(i) Potassium Bromide (aq) + Barium iodide (aq) $\rightarrow$ Potassium iodid (aq) + Barium Bromide(aq)

(ii) Zinc carbonate (s) $\rightarrow$ Zinc oxide (s) + carbon dioxide (g)

(iii) Hydrogen (g) + chlorine (g) $\rightarrow$ Hydrogen chloride

3. The reaction is given by

$$Zn + H_2SO_4 \rightarrow ZnSO_4 + H_2$$

(i) White the ionic equation for the reaction

(ii) The ionic equations can be represented by two half equations. Write these equations.

(iii) Explain why this is a redox reaction

4. Why respiration is considered an exothermic reaction? Explain.

5. Identify the type of reaction in the following

(a) $ZnCO_3 + 2HCl\ (aq) \rightarrow ZnCl_2\ (aq) + H_2CO_3\ (aq)$

(b) $2NaBr\ (aq) + Cl\ (g) \rightarrow 2Nacl\ (aq) + Br_2\ (aq)$

(c) $2CuO\ (S) \xrightarrow{\text{Heat}} 2Cu\ (s) + O_2\ (g)$

6. A student dropped few pieces of marble in dilute hydrochloric acid contained in a test tube. The evolved gas was then passed through lime water. What change would be observed in lime water? Write balanced chemical equation for both the change observed?

7. In the reaction $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$

(a) Name the substance oxidised.

(b) Name the oxidising agent.

(c) Name the reducing agent and the substance reduced.

8. Give one example each of

(a) Thermal decomposition

(b) Electrolytic decomposition

(c) Photo decomposition

9. Write three equations for decomposition reaction where energy is supplied in the form of heat, light and electricity?

10. When you mix solutions of lead (II) nitrate and potassium iodide,

(i) What is the colour of the precipitate formed? Name the compound evolved?

(ii) Write a balanced chemical reaction?

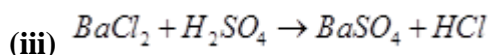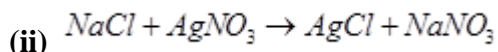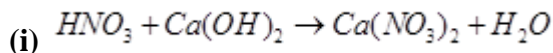(iii) Is this a double displacement reaction?

11. Transfer the following into chemical equations and balance them.

(i) Hydrogen gas combines with nitrogen to from ammonia.

(ii) Hydrogen sulphide gas burns in air to give water and sulphurdioxide.

(iii) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas.

12. Balance the equations

(i) $HNO_3 + Ca(OH)_2 \rightarrow Ca(NO_3)_2 + H_2O$

(ii) $NaCl + AgNO_3 \rightarrow AgCl + NaNO_3$

(iii) $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + HCl$

13. What is balanced chemical equation? Why should chemical equation be balanced?

14. An aqueous solution of metal nitrate P reacts with sodium bromide solution to form yellow ppt of compound Q which is used in photography. Q on exposure to sunlight undergoes decomposition reaction to form metal present in P along with reddish brown gas. Identify P &Q. Write the chemical reaction & type of chemical reaction.

15. Bhawana took a pale green substance A in a test tube. And heated it over the flame of a burner. A brown colored residue B was formed along with evolution of two gases with burning smell of sulphur. Identify A & B. Write the chemical reaction involved.

16. A reddish brown vessel developed a green colored solid X When left open in air for a long time. When reacted with dil H_2SO_4, it forms a blue colored solution along with brisk efficient due to colourless & odourless gas Z. X decomposes to form black colored oxide Y of a reddish brown metal along with gas Z, Identify X, Y, & Z.

16. Astha has been collecting silver coins and copper coins. One day she observed a black Coating on silver coins and a green coating on conner coins. Which chemical phenomenon is responsible for these coatings? Write the chemical name of black and green coatings?

17. Write the balance equation for the following reactions Give reasons for the following reactions?

i. Hydrogen + Chlorine $\longrightarrow$ Hydrogen chloride

ii. Barium chloride + Aluminium sulphate $\longrightarrow$ Barium sulphate + Aluminium chloride

iii. Sodium + water $\longrightarrow$ Sodium hydroxide + water

18. Fe_2O_3 + 2Al $\longrightarrow$ Al_2O_3 + 2Fe

The above reaction is an example of a (a) combination reaction   (b) double displacement reaction

(c) decomposition reaction   (d) displacement reaction

LIGHT

1. A beam of rays, parallel to the principal axis, is incident on a convex mirror. Show diagrammatically, the path of these rays after reflection from the mirror.

2. Find the power of a concave lens of focal length 4 m?

3. With respect to air the refractive index of ice is 1.31 and that of rock salt is 1.54. Calculate the refractive index of rock salt with respect to ice?

4. A concave mirror produces three times magnified (enlarged) real image of an object 10 cm in front of it. Where is the image located?

5. Three mirrors, one plane, one concave and one convex are lying on the table. How can a person identify them without touching them or using any other apparatus or device?

6. Obtain the formula for the focal length of a lens in terms of object distance (u) and magnification (m)

7. In what S.I unit is the power of lens stated? A convex lens has a focal length of 50 cm. calculate its power?

8. Light enters from air into diamond which has a refractive index of 2.42. Calculate the speed of light in diamond. The speed of light in air is 3.0×10^8 m/s.

9. Light is incident at an angle of

   (i) 30^0

   (ii) 45^0, on the same face of a given rectangular slab. If the angles of refraction, at this face are r_1 and r_2 in the two cases. Obtain the relation between these two angles.

10. Why do we prefer a convex mirror as a rear view mirror in vehicles?

11. A doctor has prescribed a corrective lens of power 1.5 D. Find the focal length of this lens. Is the prescribed lens diverging or converging.

12. Define the principle focus of a concave mirror.

13. The radius of curvature of a spherical mirror is 20 cm. what is its focal length?

14. Name a mirror that can give an erect and enlarged image of an object.

15. Why do we prefer a convex mirror as a rear-view mirror in vehicles?

16. Find the focal length of a convex mirror whose radius of curvature is 32 cm.

17. A concave mirror produces three times magnified real image of an object placed at 10 cm in front of it. Where is the image located?

18. A ray of light traveling in air enters obliquely into water. Does the light ray bend towards or away from the normal? Why?

19. You are given kerosene, turpentine and water. In which of these does the light travel fastest? Use the information given in table 10.3

20. The refractive index of diamond is 2.42. What is the meaning of this statement?

21. Absolute refractive Index of some of material is tabulated below

Material	Rock salt	Kerosene	Water	Diamond
Refractive	1.54	1.44	1.33	2.42

i) In which of these does light travel fastest and why?

ii) arrange these materials in ascending order of their optical densities.

22. A rod of length 10 cm lies along the principal axis of a concave mirror of 10 cm in such a way that the end closer to the pole is 20 cm away from it. Find the length of image?

23. Two lenses 1&2 are placed in contact. Focal length of lens 1 is 20 cm and of 2 is – 10 cm. Calculate

i) Total Power of combination

ii) What is the nature of combination.

24. What type of lens must be placed at XV so that image I shifts to I'

25. An object is placed at a distance of 50 cm from a convex minor. State two characteristics of the image formed.

26. Write two uses of:- Concave mirror , Concave lese, Convex mirror and Convex lense

OUR ENVIRONMENT

1. DDT that was sprayed in minute amount on food plants was detected in high concentration in man? How did it happen? Explain.

2. Describe how ozone layer is formed?

3. What are the major components of environment?

4. Why are the same substances biodegradable and some non-biodegradable?

5. Explain why a food chain consists of few steps only? Write a food chain having five steps.

6. It is the responsibility of the government to arrange for the management and disposal of waste. As an individual you have no role to play. Do you agree? Support your answers with two reasons.

7. Why food chains consist of three or four steps only?

8. What will happen if decomposers are not there in the environment?

9. The number of malarial patients in a village increase tremendously, when a large number of frogs were exported from the village. What could be the cause for it? Explain the help of food chain?

10. Why is damage to the ozone layer a cause for concern? What steps are being taken to limit this damage?

11. What are the components of an ecosystem? Explain with examples

12. Write any three activities which are eco-friendly.

13. Give any two ways in which biodegradable substances would affect the environment.

  (a) They will serve as breeding ground for flies and mosquitoes which are carriers of 3 disease like cholera, malaria etc. Give any two ways in which non-biodegradable substances would affect the environment.

  (b) They produce foul smell, thus causing air pollution.

14. Give difference between produces and consumers. Mention one example of each.

15. There are no predators for tiger or lion. Why?

16. What are the measures to protect ozone depletion?

17. Describe three biotic component of ecosystem. Also give examples.

18. What is the role of decomposers in an ecosystem?

19. What will happen if we kill all the organisms in one trophic level?

20. Why are some substances biodegradable and some non-biodegradable?

INFORMATION TECHNOLOGY ASSIGNMENT

DIGITAL DOCUMENTATION

Answer the following questions-

(1) What is a style ? Name some style categories.

(2) What is a character style? How is it different from paragraph style ?

(3) What is cropping ? How is it useful ?

(4) What is the actual use of mail merge fearture available in Ms word?

(5) Discuss the role of three main components of mail merge-the main document,the data base,the Merge fields.

(6) What are templates ?What are the advantages of templates?

(7) How will you set up the default templates in writer?

(8) What is a table of contents? How is it useful?

(9) What are the advantages and disadvantages of verbal communications?

(10) What are the advantages and disadvantages of written communications?

Note:- Write answers only in computer CW copy