



SPRINGFIELD PUBLIC SCHOOL

Holiday Homework

Session(2024-25)

CLASS:- 9th

Dear Parent

The summer Vacation for all classes have commenced from 24/05/2024, the students are encouraged to spend significant time in regular studies, Holiday home work for your ward is being sent to you. I would encourage every child to develop healthy reading habits in order to be relevant and smart.

Regards

Instructions :-

- All Homework assignments to be done in A4 size sheets.
- Homework should be presentable and hand written only.

Subject:- Mathematics

Assignment:

- 1) Write degree of polynomial of $5x^3+4x^2+7x$.
- 2) Classify the following as linear quadratic and cubic polynomial x^3+x and x^2+8x+9
- 3) Find zero of polynomial of $2x+5$
- 4) Find remainder when x^3+3x^2+3x+1 is divided by $5+2x$.
- 5) Factorize : $3x^2-x-4$.
- 6) Write in expanded form : $(2x+1)^3$ and $(2a-3b)^3$.
- 7) Evaluate by using suitable identity as $(99)^3$.
- 8) In which quadrant and on which do each of points $(-2, 4)$ $(3, -1)$, $(1, 0)$ lies???
- 9) Plot the points $(2, 5)$ $(-1, 7)$ $(0, 4)$ and $(1, 6)$ $(3, -1)$ on graph

10) What is name of horizontal and vertical lines drawn to determine the position of point in Cartesian plane?

11) What is name of each part of plane formed by these two lines.?

12) Define the quadrant system ? Explain it with negative and position signs.

(Some important questions)

* What is point of intersection of the both axis?

*The coordinate axes divides the plane into four parts are called.....

*What is coordinate of point on X axis and point on y axis?

*Define coordinate of origin

* What is name of polynomial containing one term

Note: Write these questions in your fair notebook

ACTIVITY:

1) Create a beautiful spiral depicting Square root of 2, 3, 4, 5, 6...

2). Watch and write about the story of movie "The Man who knew infinity ". (Movie is based on life of Srinivasa Ramanujan)

Write any three identities/equations/results/theorems given by Ramanujan.

3) ART INTEGRATED PROJECT – The Andaman and Nicobar Islands are home to about a dozen of endangered languages. The majority of the population speaks immigrant languages. Demonstrate different languages spoken in Andaman and Nicobar through a Pie Chart. The most common spoken language in Lakshadweep is Malayalam. Search for others language spoken here and exhibit it by a Pie chart.

4). **FUN 'N' LEARN ACTIVITY** : Our window to avoid climate catastrophe is closing rapidly. Write down the average temperature in Delhi for the month of June for past 5 years. Mention the reason behind this change of climatic change and also give some suggestions.

Subject - Science

* Some experiments of Physics, Chemistry, Biology are given below, you need to write there experiments in practical files.

Chemistry:

1. Preparation of:

(a) A true solution of common salt, sugar and alum

(b) A suspension of soil, chalk powder and fine sand in water.

(c) A colloidal solution of starch in water and egg albumin/milk in water and distinguish between these on the basis of transparency, filtration criterion, stability.

2. Preparation of (a) A mixture (b) A compound using iron filings and sulphur powder and distinguishing between these on the basis of:

(i) Appearance, i.e., homogeneity and heterogeneity

(ii) Behaviour towards a magnet

(iii) Behaviour towards carbon disulphide as a solvent (iv) effect of heat

3. Perform the following reactions and classify them as physical or chemical changes:

(a) Iron with copper sulphate solution in water (b) Burning of magnesium ribbon in air

Revision Worksheet

Chemistry (matter in our surrounding)

1. List any two characteristics of particles of matter.

2. Melting points of four solids A, B, C and D are 78°C , 262°C , 100°C and 168°C . Arrange them in the decreasing order of their Inter particle force of attraction

3. An unlit incense stick (agarbatti) gives smell only when we come close to it but on lighting the stick we get smell even far away from it, why?

4. What is the effect of temperature on kinetic energy?

5. Which has highest kinetic energy, particles of water at 100°C or steam at 100°C ?

6. Why gases are compressible but not liquids?

7. Give the full form of LPG and CNG.

8. A spoonful of sugar is added to a beaker containing 500 ml of water and stirred for a while. State any two observations that you will make.

9. Suggest a method to liquify atmospheric gases.

10. Why do we feel cool after applying shave lotion or perfume?

11. A gas jar containing air is placed upside down on a gas jar of bromine vapour. It is observed that after some time, the gas jar containing air also becomes reddish brown.

a) Explain why this happens.

b) Name the process involved.

12. Predict the physical state of matter in each case from the following characteristic.

a) It has a definite volume but no definite shape.

b) It is rigid and highly incompressible.

c) Kinetic energy of particles is minimum in this state.

d) It represents the most highly compressible form of matter.

13. Distinguish solids, liquids and gases in a tabular form under the following properties.

e) rigidity

f) compressibility

g) inter particle force of attraction

h) kinetic energy of particles.

14. What is Diffusion and explain why, it occurs faster in a gas than in a liquid.

Ice, water and steam are three states of a substance and not different substances. Justify.

15. Convert the following Celsius temperatures to kelvin scale

1) 273°C ii) 30°C iii) 100°C

16. Dry ice is obtained when a gas is compressed at high pressure. Name the gas and state what happens to it when the pressure is released.

17. Give reasons for the following:

a) A sponge is a solid but can be easily compressed.

b) Clothes dry faster on a windy day.

c) Smell of perfume travels a few yards away.

18. When a solid melts, its temperature remains the same. Give reason.

19. How will you show by experiment that air contains water vapours?

20. Give reasons for the following:

- a) Doctors advise to put strips of wet cloth on the forehead of a person having high temperature.
- b) Ice at 0 degree Celsius is more effective in cooling than water at 0 degree Celsius.

21. Why does water have higher boiling point than alcohol?

22. Explain the interconversion of three states of matter.

Physics:-

1. Verification of the Laws of reflection of sound.
2. Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.
3. Establishing the relation between the loss in weight of a solid when fully immersed in
 - (a) Tap water
 - (b) Strongly salty water with the weight of water displaced by it by taking at least two different solids.

Biology:

1. Preparation of stained temporary mounts of (a) onion peel, (b) human cheek cells.

Record observations and draw their labelled diagrams.

2. Identification of Parenchyma, Collenchyma and Sclerenchyma tissues in plants, striped, smooth and cardiac muscle Fibers and nerve cells in animals, from prepared slides. Draw their labelled diagrams.

Note:- *Buy New way Publication practical file

* Complete the worksheets in the separate pdf files sent of Biology, Chemistry and Physics

Subject: English

PART 1 : - HANDWRITING

Buy a cursive writing book from the store and write one page each day for your handwriting practise.

PART 2:- WRITING SECTION

1. Write diary entry of fifteen days of your summer vacation.
2. Revise and learn the lesson and poems, we have done in our Live classes.

3. Read two story books of your own choice and write book reviews of both the books. (English book)
4. Write a letter to your cousin, who is living in some other city, about how you have spent your Summer Vacations.
5. List at least five verbs whose present, past and past participle forms are same.
- 6) Create your curriculum vitae in M.S Word.
- 7) Make a power point presentation on topic, "Bullying and cyber bullying"

SUBJECT:- Social Science

- 1 Do any 10 questions from the chapter of history (French revolution)
- 2 Do any 10 questions from the civics chapter (what is democracy? why do we need democracy)

3 Make any one assignment on the given topics .

- 1) The middle class played a very important role in the rise of French revolution.

Explain

- 2) Draw major features of democracy in India as a democratic country.

*Students need to draw a world map in a chart paper and trace the course of world war 1. The places where was broke out and countries got involved in the war from period of 1914 to 1918.

*Every Student has to compulsorily undertake one project on Disaster management. Students can either take natural disasters like Tsunami or man made like Bhopal Gas Tragedy .

Project should include :-

Name of the disasters, their consequences and management,* What steps should be taken in advance to face such situations.

Subject – Economics

Holidays Homework Assignment

Read Ch-2 People as Resource

Write the given assignment in your notebook.

विषय :- हिंदी

ग्रीष्म-अवकाश

गृह-कार्य

- 1) 15 अगस्त 'स्वतंत्रता दिवस' पर एक सुन्दर-सा चित्र एक चार्ट पर स्वतंत्रता दिवस सन्देश सहित बनाइये ।
- 2) पद्य खंड 'रैदास' काव्य खंड की पंक्तिओ को लिखकर एक सुन्दर-सा चार्ट रैदास जी के चित्र सहित बनाइए ।
- 3)"आपकी कंप्यूटर की कंपनी है आप नये और पुराने कंप्यूटर बिक्रेता है' आप इस विषय पर एक प्रभावी विज्ञापन तैयार करें।
- 4) आप छात्रावास विद्यार्थी हो, गर्मियों की छुट्टियों में अपने परिवार के साथ जहाँ भी जाने की इच्छा रखते हो उस स्थान की खूबियाँ बता कर अपनी माता-जी को पत्र लिखिए लिखिए ।
- 5)अपनी कल्पना को एक सुन्दर चित्र सहित लिखिए कि 'आपके घर पर एक चिड़िया ने घोंसला बना लिया है, उसमें चिड़िया के दो छोटे-छोटे बच्चें है और आप प्रतिदिन उनका ख्याल रखते हो,आप अपने परिवार के साथ कुछ दिनों के लिए बाहर घूमने जा रहे हो,तो आप चिड़िया के इस सुन्दर परिवार के लिए क्या-क्या सुविधाएं जुटा कर जाओगे ।'

नोट :- *हिंदी का सभी गृहकार्य एक फ़ाइल में तैयार करें फ़ाइल कवर को सुन्दर तरीके से सुसज्जित कीजिये ।

* पढ़ाये गए पाठ्यक्रम को अच्छे से याद करें व लिखित अभ्यास करें।

*आपकी छुटियाँ आनंददायक हों, सब स्वस्थ रहें ।

Subject: Fine Arts homework

Project Title: "Eco-Art: Recycled Sculpture"

Objective:

Create a unique sculpture using recycled materials to explore creativity, sustainability, and three-dimensional art forms.

Materials Needed:

*Recycled materials (plastic bottles, cardboard, aluminium cans, paper, fabric scraps, etc.)

*Glue or hot glue gun

*Scissors

*Paint, markers, or other decorating supplies

*Optional: Wire, string, or tape for additional structure and support

Instructions:

1. Collect Recycled Materials:

- Gather various recycled items

from home. Look for interesting shapes and textures in plastic bottles, cardboard boxes, aluminium cans, old magazines, fabric scraps, and other household items.

2. Plan Your Sculpture:

- Sketch a few ideas for your sculpture. Consider what you want to create an animal, a robot, an abstract form, or something else imaginative. Think about how the different materials can be combined to form your design.

3. Construct the Base:

Start with a sturdy base for your sculpture. This could be a piece of cardboard or a solid plastic container. Ensure it can support the weight of the materials you will add.

4. Assemble the Sculpture:

- Begin building your sculpture by attaching pieces together using glue, tape, or wire. Experiment with different configurations and arrangements. Be creative in how you use the materials - for example, a plastic bottle can become a body, and aluminium cans can be cut and shaped into wings.

5. Add Details and Texture:

- Enhance your sculpture by adding smaller details. Use bottle caps, fabric scraps, paper, and other materials to create texture and intricate parts of your sculpture. Think about how to make your creation visually interesting from all angles.

6. Paint and Decorate:

Once your sculpture is assembled, use paint, markers, or other decorating supplies to add colour and patterns. This step can help unify the different materials and bring your sculpture to life.

7. Title and Explain:

- Give your sculpture a creative title and write a brief explanation. Describe the materials you used, your inspiration for the design, and what message or story your sculpture conveys.

8. Present Your Artwork:

- Bring your completed sculpture to class and be prepared to share it with your classmates. Explain your creative process, the challenges you faced, and what you learned about working with recycled materials.

Tips:

* Be safe when handling sharp objects like scissors or cutting cans. Ask for help if needed.

* Consider the balance and stability of your sculpture, especially if it has tall or protruding elements.

* Use the hot glue gun with caution and adult supervision if necessary.

* May your holidays be auspicious. May you all be healthy and happy 😊👍