AIR FORCE SCHOOL SULUR

SUMMWER VACATION-2024-25

HOLIDAY HOMEWORK

CLASS- IX

SCIENCE

1.“Apna Gaon” (Our Village) Documentary

Students who are visiting their village during the summer holidays. Record a short video documentary showcasing its unique traditions, crafts, or landmarks. Moreover, interview local residents (with permission) to capture their stories. Then share your experiences and learnings once the school resumes.

2. BE THE BUDDING SCIENTISTS!

Design your own experiment and feel like a scientist.
Instructions:
-Choose any topic related to Physics/ Biology/ Chemistry and design an experiment using simple things around to explain laws, principles, phenomena around us.
-Prepare a working model or an activity and also a chart related to it.

3. POWER POINT PRESENTATION

1. Each child has to prepare a power point presentation (10 – 12 slides)
2. Your presentation should be well supported by a quiz based on the topic (5 to 7questions along with their answers).
3. The power point presentation to be submitted in the form of a hard copy in a file on A4 size sheets.
4. Soft copy of the project to be mailed to your respective teacher in-charge as per his/her instructions.
→Students can choose topic of their own interest (subject related)

4. Plan for a working/ static STEM project for science exhibition

COMPUTER

1. Complete PART-A Employability Skills notes and short answer questions of Unit 1 – 4 in the notebooks.
2. Learn what is Sustainable Development and 17 goals.
3. Write a short note of SDG and paste the picture of the Goals in the notebook.

विषय -हिंदी

* विषय: - प्राकृतिक आपदा (बाढ़ग्रहस्त चेन्नई 2023)

उपविषय :- मानवता से रिश्ता

(1)   सरकार द्वारा जनता को प्रदान की गई सहायता ....

(2)   आम आदमी की एक दूसरे को दी गई सहायता.......

ऊपर दिए गए विकल्पों को ध्यान में रखकर 3D मॉडल (प्रतिरूप) बनाएँगे।

*पाठ 1,2 (गद्य खंड) .... क्षितिज

*पाठ 1 (काव्य खंड)........   क्षितिज

*उपसर्ग और प्रत्यय......... व्याकरण

*महावरे व लोकोक्तियाँ...... व्याकरण

लेखन व स्मृति कार्य पूरा करो।

SANSKRIT

- ❖ अकारांत पुल्लिंग शब्द - देव
- ❖ अकारांत नपुंसक लिंग शब्द - फल
- ❖ आकारान्त स्त्रीलिंग शब्द - रमा
- ❖ इकारांत पुल्लिंग शब्द - मुनि
- ❖ ई कारान्त स्त्रीलिंग शब्द - नदी
- ❖ उ कारान्त पुल्लिंग शब्द - भानु

- ❖ उ कारान्त स्त्रीलिंग शब्द - धेनु
- ❖ उ कारान्त नपुंसक लिंग शब्द - मधु
- ❖ ऋ कारान्त पुल्लिंग शब्द - पितृ
- ❖ ऋ कारान्त स्त्रीलिंग शब्द - मातृ

ENGLISH

Select any 4 topics from the list provided and write detailed descriptive passages. Kindly use sensory details, descriptive language, and narrative techniques to bring these topics to life. (200-300 words)

1. Describe a day spent at the beach - the sights, sounds, and experiences.
2. Write about a visit to a national park, detailing the wildlife and natural beauty encountered.
3. Describe an exciting adventure you had during the summer break.
4. Share your experience visiting a historical monument or site.
5. Describe life in a rural village during the summer vacation.
6. Write about a camping trip and the challenges and joys of living outdoors.
7. Write about your experience growing a garden or taking care of plants during the summer.
8. Share your experience visiting family members during the vacation.

SOCIAL SCIENCE

1.Documentary Analysis: Watch a documentary on social science topic and write a review discussing its accuracy, relevance and impact.

2.Prepare a report on general election and general result of India 2024

3.Complete your classwork

4.Remember to manage your time effectively and start early to avoid last -minute stress. Use A4 sheets for assignments.

MATHEMATICS

CHAPTER 1: NUMBER SYSTEM

VERY SHORT AND SHORT ANSWER TYPE QUESTIONS

Q1. Find x if $27^x = 9/3^x$

Q2. Solve $(\sqrt5)^7 \div (\sqrt5)^5 = 5^x$.

Q3. Evaluate $\sqrt[3]{4^2} \cdot \sqrt[3]{8^2}$.

Q4. Find $\frac{1}{x}$ with rational denominator if $x = \sqrt5 + 2$.

Q5. Arrange the following in ascending order of magnitude : $\sqrt[3]{3}, \sqrt[3]{4}, \sqrt[5]{2}$

Q6. Arrange the following in descending order of magnitude : $\sqrt[8]{90}, \sqrt[4]{10}, \sqrt6$

Q7. Find the decimal representation of $2\frac{5}{12}$ and state its type.

Q8. Evaluate $\sqrt[4]{256} + \sqrt[3]{216} - \sqrt[6]{64}$

Q9. Simplify $\left(\sqrt[3]{\frac{27}{125}}\right)^{-2} \div \left(\sqrt[3]{\frac{27}{125}}\right)^{-4}$

Q10. Express each of the following recurring decimals as a rational number
  i). 0.5
  ii). 0.13
  iii).0.341

Q11. Add $2\sqrt3 + \sqrt5$ and $\sqrt3 - 3\sqrt5$

Q12. Divide $12\sqrt8$ by $2\sqrt2$

LONG AND VERY LONG ANSWER TYPE QUESTIONS

Q13. If $x = 2 + \sqrt3$, find the value of $\left(x - \frac{1}{x}\right)^2$

Q14. If $a = 1 - \sqrt5$, find the value of $a^2 - 1/a^2$

Q15. Simplify:

$$\frac{6}{2\sqrt3 - \sqrt6} + \frac{\sqrt6}{\sqrt3 + \sqrt2} - \frac{4\sqrt3}{\sqrt6 - \sqrt2}$$

Q16. Express each of the following recurring decimals as a rational number p/q
  i.   0.127
  ii.   0.3578
  iii. 0.7435

Q17. Show that:

$$\frac{1}{3 - \sqrt8} - \frac{1}{\sqrt8 - \sqrt7} + \frac{1}{\sqrt7 - \sqrt6} - \frac{1}{\sqrt6 - \sqrt5} + \frac{1}{\sqrt5 - 2} = 5$$

Q18. If a,b and c are rational numbers, find their values in each of the following

    i. $\dfrac{5+2\sqrt{3}}{7+4\sqrt{3}} = a + b\sqrt{3}$

    ii. $\dfrac{\sqrt{2}+\sqrt{3}}{\sqrt{18}-\sqrt{12}} = a - b\sqrt{6} + c\sqrt{3}$

Q19. Simplify:

$$\sqrt[4]{81} - 8\sqrt[3]{216} + 15\sqrt[5]{32} + \sqrt{225}$$

Q20.Simplify

    i). $\sqrt{3 \times 5^{-3}} \div \sqrt[3]{3^{-1}} . \sqrt{5} \times \sqrt[6]{3 \times 5^4}$

    ii). $\dfrac{25^{\frac{3}{2}} \times 243^{\frac{5}{3}}}{16^{\frac{5}{4}} \times 8^{\frac{4}{3}}}$

    iii). $\left(\dfrac{81}{16}\right)^{\frac{-3}{4}} \times \left[\left(\dfrac{25}{9}\right)^{\frac{-3}{2}} \div \left(\dfrac{5}{2}\right)^{-3}\right]$