HOLIDAYS HOME WORK FOR SUMMER VACATION 2024

CLASS - IX

"Two roads diverged in a wood, and I—
I took the one less travelled by,
And that has made all the difference."

Dear Mahavirians,

Holidays are a time for rejuvenation, a chance to recharge our minds and hearts. At the same time, we must also nourish our souls with purposeful activities. Here's a gentle reminder on how to make the most of this break:

Read Extensively: Readers are leaders. Unplug from screens, and explore the world of books. Make a habit of reading every day.

Catch Up with Passions and Hobbies: Remember that guitar gathering dust in the corner? Or the canvas waiting for your brush strokes? Now is the time to rekindle those flames. Dive into your hobbies—whether it's painting, dancing, coding, or cooking. Let your passions ignite your days.

Quality Family Time: Families are the heartbeats of our lives. Share stories, cook together, play board games, and laugh until your bellies ache. These moments are the threads that weave the fabric of cherished memories.

Academics and Studies: Yes, even during holidays, let's keep the academic flame alive. Regular study sessions need not be burdensome. A chapter a day, a math puzzle, or a historical documentary—these small steps maintain the rhythm of learning.

Homework with a Twist: Homework doesn't have to be done in a mundane manner. Be innovative! Create a science project that dazzles, write a poem that dances with metaphors, or solve math problems with flair. Remember, it's not just about finishing; it's about understanding and enjoying the process.

So, dear students, embrace this break with open arms. Explore both the well-trodden paths and the hidden trails. Let curiosity be your compass, and creativity your guide.

Wishing you a joyful and enriching summer break!

Ruchika Sukhija
Principal

ENGLISH

INSTRUCTIONS:

- ❖ Attempt all the questions in scrap file.
- ❖ Do as instructed in the class.

TOPIC 1: Reading Hour (Portfolio Activity)

QUESTION 1: Read and collect newspaper/ magazine articles, stories or poems based on the themes of the MCB (ATLEAST one for each theme). It will be followed by a presentation on the same in the class after summer vacation.

QUESTION 2: Read a collection of short stories/novel suitable for your age and prepare a presentation on the main highlights of the book.

Suggested Readings:

1. Grandparents' Bag of Stories-Sudha Murthy
2. Heaven Lake- Vikram Seth
3. Gulliver's Travel- Jonathan Swift
4. The Merchant of Venice (Abridged)- William Shakespeare
5. The Hound of the Baskervilles – Sir Arthur Conan Doyle
6. The Story of My Life – Hellen Keller
7. Boy – Tales of Childhood – Roald Dahl
8. Wings of Fire – A.P.J. Abdul Kalam
9. Playing It My Way – Sachin Tendulkar
10. Book of Humour – Ruskin Bond

Or a book of your choice, according to the class level

TOPIC 2: Multiple Assessment Activity

Read poems and choose the poem that you find to be the most interesting (not in your textbook). Write this poem, aesthetically and learn it for presentation in the class.

TOPIC 3: Paragraph Writing

Write a paragraph of 150 words in the scrap file, on any recreational activity/outing/learning of a new skill taken up during summer vacation. Illustrate it with a visual.

SOCIAL SCIENCE

- **Art Integration**

1) Make a creative and beautiful project on:

Topic - Disaster Management

Guidelines:

- Identifying potential risks and hazards.
- Creating plans to reduce the risks and hazards.
- preparing people for disaster response.
- putting in place a structure to manage relief operations.
  2) Make a 3 D model of Indian Monuments.

Roll no. 1-4	Sustainable Development
Roll no. 4-8	Food Security in India
Roll no. 9-12	Economic Sectors in India
Roll no. 13-16	Indian Judicial System
Roll no. 17-20	Drainage
Roll no. 21-24	Course of River
Roll no. 25-28	Population Pyramid on Indian Map
Roll no. 29-32	Any business idea model

You will be giving a presentation of your Model so prepare yourself on the related information of the model.
Use only eco-friendly material to make your model.

4) Make Water fall cards of all the major events of French Revolution.

5) Draw a diagram in your activity file explaining the features of Democracy using appropriate pictures.

- **ICT**

Make a digital project: Topic- Conservation and Protection of Forests.

Roll no. 1-8 Flip book
Roll no. 9-16 PPT

Roll no. 17-24 Short film
Roll no. 25-32 Poster

● **Manuscript**

Make a manuscript: Use your own imagination and creativity to make a manuscript of Preamble of Indian Constitution.

- ● Make a Standing Model on the following topics:

    Roll no. 1-4 The French Revolution (Louis XVI, Robespierre, Napoleon, Philosophers Etc.)

    Roll no. 5-8 The Russian Revolution (Socialists: Robert Owen, Karl Marx, Friedrich Engels, Tsar Nicolas, Bolsheviks, Mensheviks, Global Influence)

    Roll no. 9-12 Nazism and the Rise of Hitler (Hitler, Youth in Nazi, Role of Women in Nazi, Nazi Propaganda, Treaty of Versailles)

    Roll no. 13-16What is Democracy? Why Democracy? (Features, Merits, Demerits, China, Pakistan, Zimbabwe, Mexico)

    Roll no. 17-20 Democratic Rights (All fundamental rights and Duties)

    Roll no. 21-24 Physical features of India (Northern plains, Desert, Himalayan Ranges, Plateaus, Islands etc.)

    Roll no. 25-28 Food Security in India (Dimensions, Types of Hunger, Public Distribution System, Contribution of Green Revolution, Role of Cooperatives)

    Roll no. 29-32 Poverty as a Challenge (Meaning, Causes of poverty, Vulnerable group, Poverty alleviation programme)

- ● Make a crossword puzzle from the given chapters:

    Roll no. 1-6 Constitutional Design

    Roll no. 7-14 Drainage

    Roll no. 15-21 Climate

    Roll no. 22-28 Physical features of India

    Roll no. 29-32 Electoral Politics

- ● Revise all the chapters done till now.

SCIENCE

Ques. 1 Draw a colourful Science toon on A3 size sheet displaying any one of the following concept –

- Latent heat of vaporization
- Positive and negative acceleration

Ques. 2 Make working model on the following topics Roll no. wise using Biodegradable materials –

- Work and its types - (Roll no. 1 – 10)
- Eco friendly architecture - (Roll no. 11- 20)
- Space craft, Celestial body, Satellites - (Roll no. 21-30)
- Neil Bohr's / JJ Thomson / Rutherford's Atomic model - (Roll no. 31onwards)

Ques. 3 Project Report folder on any one of the Natural Resource – Wind, Solar, Water, Biomass, and other waste. Collect brief information using light coloured sheets, paste pictures, draw diagrams as discussed in the class.

Ques. 4 Complete the Numerical based worksheet of Chapter – Motion in the Homework copy.

MATHEMATICS

This Holidays H.W has two Parts:

- A. **Practice worksheet to be done in Notes Registers.**
- B. **Project work to be done on A4 size sheets and to be presented neatly in a file folder.**

PART A (Practice Worksheet)

Q1. Find a rational number between
    (i) 3/8 and 2/5   (ii) 1.3 and 1.4
    (iii) -1 and ½   (iv) -3/4 and-2/5

Q2. Write each of the following in decimal form and say what kind of decimal expansion each has.

(i) 5/ 8   (ii) 7/ 25   (iii) 3/ 11

(iv) 5/ 13   (v) 11/24   (vi) 261/400

Q3. Express each of the following decimals in the form p/q, where p, q are integers and $q \neq 0$.

(i) 0.3333......   (ii) 0.1818.......
(iii) 2.0101......   (iv) 0.2353535......

Q4. Simplify by rationalizing the denominator:

$(i) \ \dfrac{2}{\sqrt{3}-\sqrt{5}}$ $(ii) \ \dfrac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ $(iii) \ \dfrac{6}{\sqrt{5}+\sqrt{2}}$ $(iv) \ \dfrac{1}{8+5\sqrt{2}}$

$(v) \ \dfrac{3-2\sqrt{2}}{3+2\sqrt{2}}$ $(vi) \ \dfrac{\sqrt{3}-1}{\sqrt{3}+1}$ $(vii) \ \dfrac{4}{\sqrt{7}+\sqrt{3}}$ $(viii) \ \dfrac{1}{5+3\sqrt{2}}$

Q5.   If $\dfrac{5+2\sqrt{3}}{7+\sqrt{3}} = a - \sqrt{3}b$, find a and b where a and b are rational numbers.

Q6. Choose the correct options:

1.   In $2 + x + x^2$ the coefficient of x^2 is:
      (a) 2   (b) 1   (c) – 2   (d) –1

2.   In $2 - x^2 + x^3$ the coefficient of x^2 is:
      (a) 2   (b) 1   (c) – 2   (d) –1

3.   In $\dfrac{\pi x^2}{2} + x + 10$, the coefficient of x^2 is:

      (a) $\dfrac{\pi}{2}$ (b) 1   (c) $-\dfrac{\pi}{2}$ (d) –1

4. Which of the following is a term of a polynomial?

    (a) $2x$ (b) $\dfrac{3}{x}$ (c) $x^{\sqrt{x}}$ (d) $\sqrt{x}$

5. If $p(x) = 5x^2 - 3x + 7$, then $p(1)$ equals

    (a) -10 (b) 9 (c) -9 (d) 10

6. Factorisation of $x^3 + 1$ is

    (a) $(x + 1)(x^2 - x + 1)$ (b) $(x + 1)(x^2 + x + 1)$

    (c) $(x + 1)(x^2 - x - 1)$ (d) $(x + 1)(x^2 + 1)$

7. If $x + y + 2 = 0$, then $x^3 + y^3 + 8$ equals

    (a) $(x + y + 2)^3$ (b) 0 (c) $6xy$ (d) $-6xy$

Q7. Factorise each of the following expressions:

(i) $48x^3 - 36x^2$

(ii) $5x^2 - 15xy$

(iii) $15x^3y^2z - 25xy^2z^3$

Q8. Factorise

(i) $2x^2(x + y) - 3(x + y)$

(ii) $5xy(5x + y) - 5y(5x + y)$

(iii) $x(x^2 + y^2 - z^2) + y(x^2 + y^2 - z^2) + z(x^2 + y^2 - z^2)$

(iv) $ab(a^2 + b^2 - c^2) + bc(a^2 + b^2 - c^2) + ca(a^2 + b^2 - c^2)$

Q9. Factorise

(i) $25x^2 - 36y^2$

(ii) $2ab - a^2 - b^2 + 1$

(iii) $36a^2 - 12a + 1 - 25b^2$

(iv) $a^4 - 81b^4$

(v) $a^{12}b^4 - a^4b^{12}$

(vi) $4x^2 - 9y^2 - 2x - 3y$

Q10. Expand the following :

(i) $(4a - b + 2c)^2$

(ii) $(3a - 5b - c)^2$

Q11. Show that :

(i) $x + 3$ is a factor of $69 + 11x - x^2 + x^3$.

(ii) $2x - 3$ is a factor of $x + 2x^3 - 9x^2 + 12$.

Q12. Without finding the cubes, factorise $(2x - 5y)^3 + (5y - 3z)^3 + (3z - 2x)^3$

Q13. Factorise :

(i) $a^3 - 8b^3 - 64c^3 - 24abc$ (ii) $2\sqrt{2}\, a^3 + 8b^3 - 27c^3 + 18\sqrt{2}\, abc$.

Q14. Find the value of
(i) $x^3 + y^3 - 12xy + 64$, when $x + y = -4$
(ii) $x^3 - 8y^3 - 36xy - 216$, when $x = 2y + 6$

Q15. Using suitable identity, evaluate the following:
(i) 103^3 (ii) 101×102 (iii) 999^2

PART B (Project work)

- Read Chapter 5 Introduction to Euclid's Geometry from your NCERT textbook and exemplar book thoroughly. You can also take help from internet.

- Now Prepare a project file on EUCLID'S GEOMETRY. Your Project must contain information under following headings:
  i) Life and achievements of EUCLID (150 words)

  ii) What is Euclid's Geometry?
  iii) Difference b/w Axioms, postulates, and theorems
  iv) Euclid's Definitions
  v) Euclid's Axioms
  vi) Euclid's Five postulates
  vii) Equivalent version of fifth postulate

- Present your project neatly with pictures and labelled figures in a separate file folder. You may use coloured pens to make your project.

- Learn and practice solving 3x3 Rubik's cube within 1 minimum time.

- Working Models making topics to be distributed among students groupwise.
  a) With the help of cut out of right-angled triangle attached with the axle of small motor show the formation of right circular cone.
  b) With the help of cut out of rectangle attached with the axle of small motor show the formation of right circular cylinder.
  c) Show the following identity like (a+b) with the help of cutting and pasting of chart paper on any board.
  d) Make a balancing scale model using integers.

हिन्दी

- प्रिय छात्रों आपकी छुट्टियाँ आनंदमयी हो।

- आपको यहाँ जो भी गृहकार्य दिया गया है उसे **A - 4 साइज शीट** पर सुंदर लेख में लिखकर स्टिक रोल फोल्डर में छुट्टियों के बाद स्कूल में लेकर आएँ।

1. भारत की उन महिलाओं के बारे में जानकारी एकत्र कर सूची बनाएँ जिनकी आर्थिक स्थिति अच्छी नहीं थी किंतु पूरी दुनिया में अपनी मेहनत और कठिन परिश्रम के बल पर अपना तथा भारत का नाम रोशन किया तथा **100 शब्दों** में लिखें कि आप उनके जीवन से क्या सीखना चाहोगे |

2. ' समाज में फैले अंधविश्वास और कुरीतियाँ हमारे व्यवहार और जीवन पर क्या प्रभाव डालती है ?'
   - इस विषय पर अपने घर के बड़ों से चर्चा करते हुए 80 से 100 शब्दों में अपने विचार लिखिए |

3. दिल्ली के किन्हीं पाँच सार्वजनिक पुस्तकालयों में जाकर वहाँ पर दस एकभाषिक एवं द्विभाषिक शब्द - कोश की सूची तैयार कीजिए तथा इस प्रक्रिया को करने में अपने अनुभवों को 100 शब्दों में व्यक्त करें |

4. ' विकास के नाम पर आज प्राकृतिक संसाधनों का निरंतर दोहन हो रहा है उससे मानव जाति , जीव – जंतु , प्राणियों आदि के जीवन पर भी संकट बढ़ता जा रहा है।' क्या आप इस बात से सहमत हैं ? अपने विचार 100 शब्दों में लिखिए।

5. दिल्ली में 25 मई को लोकसभा चुनाव होने वाले हैं | आपके घर और आस - पास के लोगों की चुनाव को लेकर मानसिकता का अवलोकन करके तथा उनसे इस संदर्भ में बातचीत के आधार पर 100 शब्दों में एक रिपोर्ट तैयार करें |

SANSKRIT

1. संस्कृत भाषा में एक देशभक्ति गीत (स्वयं लिखें या अनुवाद करके) सुन्दर लेख में लिखिए व याद कीजिए । (10-15 पंक्तियों में)

(अपठित-अवबोधनम)
2. (क) अपठित गद्यांशं पठित्वा प्रश्नानाम् उत्तराणि लिखत- (गद्याश को पढ़कर प्रश्नों के उत्तर दीजिए।) (निम्नलिखित गद्यांश को पढ़कर दिए गए प्रश्नों के उत्तर संस्कृत में लिखिए।)

एकः टोपिकाविक्रेता अनेकवर्णाः टोपिकाः विक्रीणाति स्म। एकस्मिन् दिने श्रान्तः स एकस्य वृक्षस्य शीतलावाचाम् उपाविशत्। शनैः शनैः निद्रा तं स्ववशे अकरोत्। सः पुटकं शिरस्तले निधाय अस्वपत् । वृक्षे स्थिताः वानराः विविधवर्णयुक्ताः टीपिका चुटके दृष्ट्वा अधः अवातरन् । शनैः शनैः ते पुटकात् टोपिकाः निष्कास्य शिरसि धारयित्वा वृक्षम् आरोहन्। प्रबुद्धः टोपिकाविक्रेता या उपरि पश्यति तदा रक्तनीलवर्णाः टोपिकाः धारयतः वानरान् पश्यति। "हा देव! नष्टाः मे सर्वाः टोपिकाः। इति विलपन् सः आत्मनः शिरसि चारितां टोपिकाम् अपि वेगेन भूमी क्षिपति कथयति च "रे दुष्टाः। सर्वाः टोपिकाः तु गृहीताः। एताम् अपि नयत। प्रकृत्या अनुकरणशीलाः वानराः अपि स्व-स्वटोपिकाः भूमौ प्रक्षिप्तवन्तः । आश्चर्यचकितः सः सर्वाः टोपिकाः विचित्य स्वपुटके स्थापयित्वा प्रसन्नः सन् गृहं प्रति अचलत् ।

1. एकपदेन उत्तरत-
(क) टोपिकाविक्रेता काः विक्रीणाति स्म?   (ख) प्रकृत्या वानराः कीदृशाः भवन्ति?

II. पूर्णवाक्येन उत्तरत-
   (क) प्रबुद्धः टोपिकाविक्रेता वृक्षे कान् अपश्यत् ? (ख) श्रान्तः टोपिकाविक्रेता किम् अकरोत्?

III. भाषिककार्यम्-
(1) 'अधः' इति पदस्य किं विपर्ययपदम् अनुच्छेदे प्रयुक्तम् ? (क) शिरसि (ख) वृक्षे (ग) उपरि (घ) भूमी
(ii) 'क्षिपति' इति क्रियायाः कर्तृपदं किम् ?   (क) वानरः (ख) सः (ग) दुष्टः (घ) टोपिका
(iii) 'अनुकरणशीलाः' इति विशेषणपदस्य किं विशेष्यपदं अनुच्छेदे आगतम् ?

(क) विक्रेता (ख) वानराः (ग) टोपिका (घ) गृहम्

(iv) अस्य अनुच्छेदस्य समुचितं शीर्षकं लिखत ।

(ख) अपठित गद्यांशं पठित्वा प्रश्नानाम् उत्तराणि लिखत- (अपठित गद्याश को पढ़कर प्रश्नों के उत्तर दीजिए।

"देशाटनस्य बहवः लाभाः सन्ति। एतेन वयं सर्वेषां देशानां राजनैतिक, सामाजिक सांस्कृतिकं च रूपं ज्ञातुं समर्थाः भवामः। अद्यत्वे व्यापारः अपि प्रायशः अन्तर्राष्ट्रियव्यापारः सञ्जातः। कस्मिन् देशे कदा किं च सुलभं पदार्थस्य ज्ञानं सर्वथा अनिवार्यम् अस्ति। बहवः एतादृशाः अपरिपक्वाः पदार्थाः सन्ति। अपरिपक्वानां पदार्थानां प्राप्तिः पदार्थानां निर्माणाय अनिवार्या अस्ति। अतः तान् पदार्थान् प्राप्तुं देशाटनं कर्त्तव्यमेव वर्तते ।"

(i) एकपदेन उत्तरत - (एक पद में उत्तर दीजिए)
(क) देशाटनस्य 'कति' लाभाः सन्ति   (ख) अद्यत्वे व्यापारः 'कीदृशः' अस्ति?

॥. पूर्णवाक्येन उत्तरत - पूर्ण वाक्य में उत्तर दीजिए।
(क) सुलभं कस्य ज्ञानं सर्वथा अनिवार्यम् अस्ति? (ख) कीदृशां प्राप्तिः पदार्थानां निर्माणाय अनिवार्या अस्ति?

॥॥. विकल्पेभ्यः उचितम् उत्तरं चिनुत- विकल्पों से उचित उत्तर चुनिए।
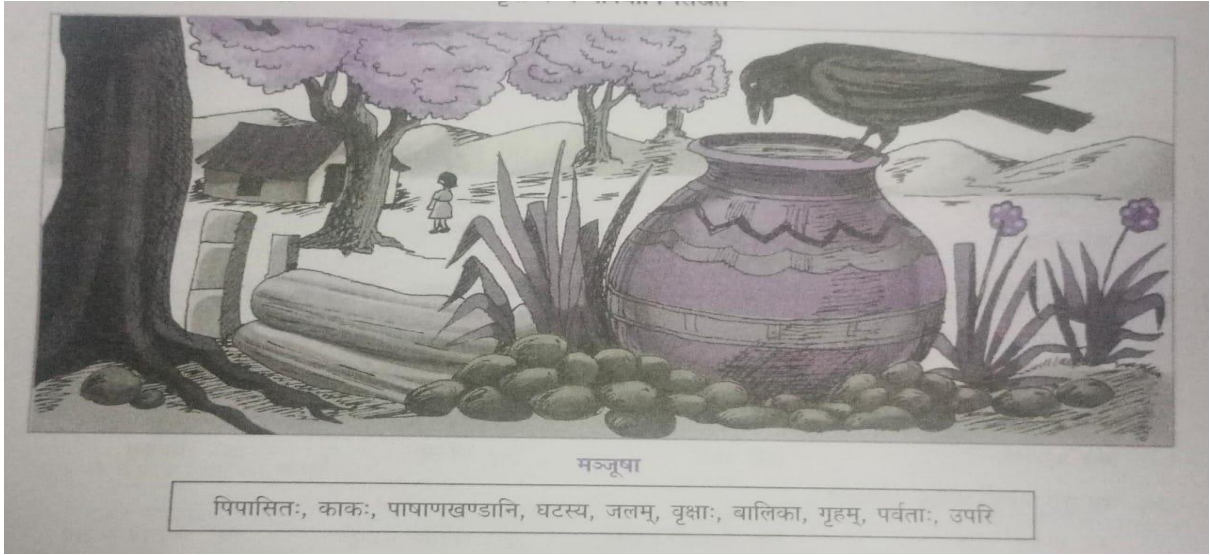(क) 'असमर्थाः' इत्यस्य कृते अत्र किं विलोमपदं प्रयुक्तम्? अ) बहवः   ब) अनिवार्याः   स) एतादृशाः   द) समर्थाः
(ख) 'भवामः' इति क्रियापदस्य कर्तृपदं किम् ?   अ) व्यापारः   ब) वयम्   स) अनिवार्याः   द) सुलाभम्

4. पञ्चदशवृक्षाणां नामानि लिखन्तु येषाम् उपयोगः औषधिनिर्माणार्थं भवन्ति । (औषधीनां नामानि अपि लेखनीयानि)। (15) ऐसे वृक्षों के नाम लिखिए जिनका उपयोग औषधि बनाने में किया जाता है (औषधियों के भी नाम लिखें)

5. चित्रं दृष्ट्वा मञ्जूषातः पञ्चवाक्यानां (5) निर्माणं कुरुत-

चित्रम्- 1

मञ्जूषा

पिपासितः, काकः, पाषाणखण्डानि, घटस्य, जलम्, वृक्षाः, बालिका, गृहम्, पर्वताः, उपरि

चित्रम्– 2

मञ्जूषा

सभागृहस्य, दृश्यम्, अनेके नेतारः अधिकारिणः च, चिन्तयन्ति, सभागृहम् भव्यं वर्तते, ते, राज्यव्यवस्थायाः विषये, चिन्तिताः सन्ति, सर्वोच्चा प्राथमिकता

INFORMATION TECHNOLOGY

1. Create a Worksheet with following headings and data:

	A	B	C	D	E	G
S.No.	Name of the Student	Maths	Sci.	S.St	Eng.	Hindi
1	Aniket Kumar	91	95	92	75	84
2	Abhijit Kundu	94	87	69	78	81
3	Arun Kumar	85	85	79	85	88
4	Sanjay Jain	96	91	94	88	72
5	Vikash Gupta	78	88	82	65	70

Calculate the following:
- Total Marks obtained by each student
- Maximum Marks obtained in Maths

- Average Marks scored in Hindi
- Insert current date and time in A7 cell
- Save the workbook by name 'Report Card

NOTE:- Write the steps for each of the above calculation and take the screenshots for printout and file it.

2.   Create an Impress presentation titled "Classical Dance forms of India".
- Place of origin
- History
- Speciality
- Costumes

Also provide relevant images for each of the above and share the link with subject teacher.

3.   Make a project from the waste products, according to your roll no.
- Roll No. 1 - 16 will make a project on computer networking.
- Roll No. 17 onwards will make a project on smart devices.

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