

## SCIENCE HOLIDAY HOMEWORK

CLASS IX



SHARDA INTERNATIONAL SCHOOL



“ The time for break, the time to rest and the time to  
rejuvenate SELF ”

**Enjoy your summer vacation**

**Dear Parents & Students**

Vacation is an excellent time to learn new skills. It is a welcome break for the children to enjoy and explore things in their own way. Here are some interesting and fun-filled activities for the children to learn and keep them occupied during the holidays.

1. Revise the explained chapters with all extra questions-answers.
2. Read and prepare a science dictionary from the following chapters including 10 words from each chapter:
  1. Matter in our surroundings
  2. Is matter around us pure
  3. The fundamental unit of life
  4. Motion
  5. Force and laws of motion
3. **Choose any one topic from the following to make a model from eco friendly material available at home:**

a) To prove law of reflection of light. (Refer activity 12.5 on page 167)

b) Tyndall Effect Activity. For reference:  
<https://www.youtube.com/watch?v=FvSxcUNtew8>

c) Making a toy car based on newton's law.  
<https://www.youtube.com/watch?v=wHE3cLlCgs0>

d) Plant cell

4. **Prepare a question bank from following chapters including 5 MCQ and 5 Assertion Reason Questions with answers from each chapter. Write it on A4 sheets.**

- a) Matter in our surroundings
- b) Is matter around us pure
- c) The fundamental unit of life
- d) Motion
- e) Force and laws of motion

5. International Yoga Day will be celebrated on 21 June across the world with great enthusiasm. Yoga is helping people to stay energetic and have strong immune system. Find yoga exercises that help you to strengthen your respiratory system and increase the oxygen level in the body. Write about them and paste the related pictures. (To be done on A-4 size sheets)

**Do all the written work on loose sheets and discuss your problems with teachers during the submission of work.**

6. Indulge yourself in some physical activity like Yoga and deep breathing exercises in the morning.
7. Add protein rich food in your meal to boost your immunity.
8. Make a chart on do's and don'ts of COVID-19 virus.

**To make a project file on the topic 'flora and fauna' in telangana keeping a scientific viewpoint.**

## Holiday Homework (2022-23)

Subject: - English

Class -9



Dear Students

Make a handmade folder and keep your holiday homework in it. (writing work to be done in loose A-4 size sheets along with pictures)

- Take a virtual Tour of Telangana and then write a paragraph describing about it. Also paste some pictures.
- To celebrate International Yoga Day, take the pictures of your family doing yoga on that day and write a descriptive paragraph describing the 'asanas' you performed.

SUBJECT-SOCIAL SCIENCE

**NOTE**-Two activities are given. Both activities are compulsory for all. Students should use pictures, diagrams, data, pie charts, and case study etc. Project should be neat and clean and proper. Presentation should be proper. Hand made diagrams and pictures will be given preference. In Activity 1 Students will also write -Biodata, introduction, Bibliography, conclusion and remark.

**ACTIVITY NO -1** Prepare a project on the topic Natural and Manmade disasters.

**ACTIVITY NO-2** Prepare an ART INTEGRATED Project on the following topic

FLORA AND FAUNA OF TELANGANA

(Students will write about Total Forest area, Types of vegetation and animal species, Names of plants and animal species, Forest cover regions, special species found in this Region, Threat to Flora and Fauna, Steps taken by the Government to protect them. Sacred species of plants and animals etc.)

- Learn the syllabus taught in class .
- Prepare the charts according to the Roll No. allotted in class

a) Map of Physiographic divisions of India

b) Map of Natural Vegetation of India

c) Plate Boundaries

d) Map of WildLife of India

e) Drainage Pattern



Holidays Home Work

Class - IX

Subject - Maths

1. Find five rational numbers between 1 and 2.
2. Find five rational numbers between  $\frac{3}{5}$  and  $\frac{4}{5}$ .
3. Locate  $\sqrt{3}$  on the number line.
4. Are the square roots of all positive integers irrational? If not, give an example of the square root of a number that is a rational number.
5. Find the decimal expansions of  $\frac{10}{3}$ ,  $\frac{7}{8}$  and  $\frac{1}{7}$ .
6. Express  $0.\overline{876}$  in the form  $\frac{p}{q}$ , where p and q are integers and  $q \neq 0$ .
7. What can the maximum number of digits be in the repeating block of digits in the decimal expansion of  $\frac{1}{17}$ ? Perform the division to check your answer.
8. Find three different irrational numbers between the rational numbers  $\frac{5}{7}$  and  $\frac{9}{11}$ .
9. Add  $2\sqrt{2} + 5\sqrt{3}$  and  $\sqrt{2} - 3\sqrt{3}$ .
10. What is the product of a rational and an irrational number?
  - a) Always an integer
  - b) Always a rational number
  - c) Always an irrational number
  - d) Sometimes rational and sometimes irrational.
11. Give an example of a monomial and a binomial having degrees as 82 and 99, respectively.
12. Find the value of the polynomial  $5x - 4x^2 + 3$  at  $x = 2$  and  $x = -1$ .
13. Find the values of a and b so that  $(2x^3 + ax^2 + x + b)$  has  $(x + 2)$  and  $(2x - 1)$  as factors.
14. Check whether  $(7 + 3x)$  is a factor of  $(3x^3 + 7x)$ .
15. Factorise  $x^2 - 1 - 2a - a^2$ .
16. Find the value of  $x^3 + y^3 + z^3 - 3xyz$  if  $x^2 + y^2 + z^2 = 83$  and  $x + y + z = 15$ .
17. Calculate the perimeter of a rectangle whose area is  $25x^2 - 35x + 12$ .
18. Compute the value of  $9x^2 + 4y^2$  if  $xy = 6$  and  $3x + 2y = 12$ .
19. Find the value of  $x^3 + y^3 + z^3 - 3xyz$  if  $x^2 + y^2 + z^2 = 83$  and  $x + y + z = 15$ .
20. If  $a + b + c = 15$  and  $a^2 + b^2 + c^2 = 83$ , find the value of  $a^3 + b^3 + c^3 - 3abc$ .
21. Without plotting the points indicate the quadrant in which they will lie, if

(i) the ordinate is 5 and abscissa is - 3

(ii) the abscissa is - 5 and ordinate is - 3

(iii) the abscissa is - 5 and ordinate is 3

(iv) the ordinate is 5 and abscissa is 3

22. Plot the points (x, y) given in the following table on the plane, choosing suitable units of distance on the axes.

x	-2	-1	0	1	3
y	8	7	-1.25	3	-1

23. Write the answer to each of the following questions:

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

(ii) What is the name of each part of the plane formed by these two lines?

(iii) Write the name of the point where these two lines intersect.

24. Points A (5, 3), B (-2, 3) and D (5, -4) are three vertices of a square ABCD. Plot these points on a graph paper and hence find the coordinates of the vertex C.

25. Write the coordinates of the vertices of a rectangle whose length and breadth are 5 and 3 units respectively, one vertex is at the origin, the longer side lies on the x-axis, and one of the vertices lies in the third quadrant.

26. Plot the points (x, y) given by the following table:

x	2	4	-3	-2
y	4	2	0	5

27. Plot the following points and write the name of the figure obtained by joining them in order:

P(-3, 2), Q(-7, -3), R(6, -3), S(2, 2)

28. Locate the points (5, 0), (0, 5), (2, 5), (5, 2), (-3, 5), (-3, -5), (5, -3) and (6, 1) in the Cartesian plane.

29. Express the number  $0.\overline{245}$  in the form of  $p/q$  where p and q are integer  $q \neq 0$

30. Give an example of a trinomial of degree 24 in the variable x.

31. Using suitable identity find the value of  $(97)^2$

32. Find the zeros of the polynomial:  $3x^2 - x - 4$ .

33. Using long division method show that the polynomial  $p(x) = x^3 + 1$  is divisible by  $q(x) = x + 1$

34. Give an example of monomial of degree 13 in the variable x.

35. Give an example of binomial of degree 100 in the variable y.

\*Activity-1 : To represent  $\sqrt{5}$  irrational number on the number line.

\*Activity -2 : To verify the algebraic identity

$$(a+b)^2 = a^2 + 2ab + b^2$$

\*Project : Algebraic Identities

HOLIDAYS HOME WORK  
2022 - 23  
ART & CRAFT

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**CLASS - 9TH .**

- 1 . **DRAW & COLOUR** IN THE SKETCH BOOK-- , ,\_PORTRAIT STUDY .
- 2 . **COMPOSITION** : -- CITY SCAPE , "POLLUTION & VIRUS FREE WORLD ".
- 3 . **CRAFT MAKING** : - ANIMALS COMPOSITION, HUMAN COMPOSITION WITH USE OF WASTE MATERIALS.

**Computer Holiday Homework (2022-23)**  
**Class – 9**

1. Create A Presentation On “**English Language on Modern World**”. In Ms – PowerPoint By Collecting Useful Information And Images About The Topic. Take Printout And Paste In Computer Notebook
2. Make a colourful Greeting card or Poster for your mother on the occasion of **MOTHER’S DAY** in Ms- Word.



ग्रीष्मावकाश हेतु गृहकार्य

विषय - हिन्दी

कक्षा - नवमी

\* लेख की स्वच्छता एवं वर्तनी पर विशेष ध्यान दें।

प्र०:1 कबीरदास जी की साखियों और पदों के आधार पर कबीर के धार्मिक और सांप्रदायिक सद्भाव संबंधी विचार तथा जीवन परिचय लिखते हुए सचित्र, दोहों सहित परिचोजना कार्य तैयार कीजिए।

प्र०:2 ऐसे दस शब्द लिखिए, जिनमें दो-दो उपसर्गों का प्रयोग हुआ हो तथा दस शब्द ऐसे लिखिए जिनमें उपसर्ग तथा प्रत्यय दोनों का प्रयोग किया गया हो।

प्र०:3 तैलंगाना के 'वनस्पतिजगत' एवं वन्यजीवों पर परिचोजना कार्य तैयार कीजिए।

प्र०:4 सूरदास के प्रसिद्ध पदों को लिखते हुए, बाल कृष्ण का चित्र बनाकर आकर्षक चार्ट तैयार कीजिए।

प्र०:5 प्रेमचंद जी साहित्य के माध्यम से सामाजिक कुरीतियों को सामने लाए थे, उनकी प्रसिद्ध कृतियों के नाम लिखकर बताइए कि किस कृति में कौन-सी सामाजिक कुरीति को उजागर किया।

प्र०:6 'डिजिटल इंडिया कार्यक्रम' के कारण देश की प्रगति को किस प्रकार नया रूप मिला, विषय पर लगभग 120 शब्दों में अनुच्छेद लिखिए।

प्र०:7 एक लेख को रूप में लिखिए।