ACADEMIC WORLD SCHOOL™
BEMETARA

SESSION: 2022-23
SUMMER VACATION ASSIGNMENT
CLASS: X

General Instructions:

1. Write in a clear and legible handwriting.

2. Complete all the homework in a separate subject Summer Vacation Homework Notebook.

3. **DO NOT COPY AND PASTE FROM THE INTERNET**. (Assignment will be rejected)

4. In case of reference from the internet, you may:

   A. Read the content from the internet, if you wish and paraphrase (Rewrite in your own words)

   B. Mention the source of your information by providing the link from the internet for the verification by the teachers.

5. Marks awarded will be counted in the final scores at the end of the session.

6. The Summer Vacation HW will be submitted immediately upon arrival to school after Summer Vacation.

7. For any assignment related query do post your question on E-Mail Id of respective subject teacher. List of Subject Teacher's E-Mail ID attached.

Note for the Parents:

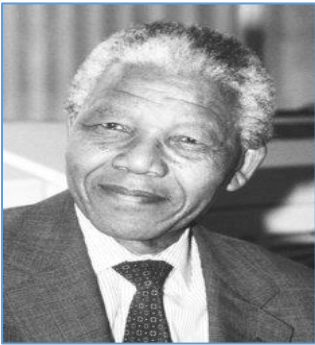**Parents are requested to guide his/her wards to complete their assignments honestly and submit by the due date.**

P.T.O

ENGLISH

I. **(Analyzing)**

  1. How did the system of racial discrimination hurt the people of South Africa?

(Analysis)

II. **(Evaluating) -**

1. Collect the information about Nelson Mandela and write a profile on the character and personality of Nelson Mandela. (Your activity should include all the points about Mandela given in the image & add your own points)

FULL NAME _____

DATE OF BIRTH _____

DATE OF DEATH _____

PLACE OF BIRTH _____

YEARS SPENT IN PRISON _____

BOOKS _____

FOUGHT AGAINST _____

POLITICAL PARTY _____

  III. **(Creating)**

Find information about these people and prepare a photo album of your profile pages based on their service to the humanity.

(Materials required: A4 size paper, colour pens, colour pencils, or anything of your choice to make the sheet presentable)
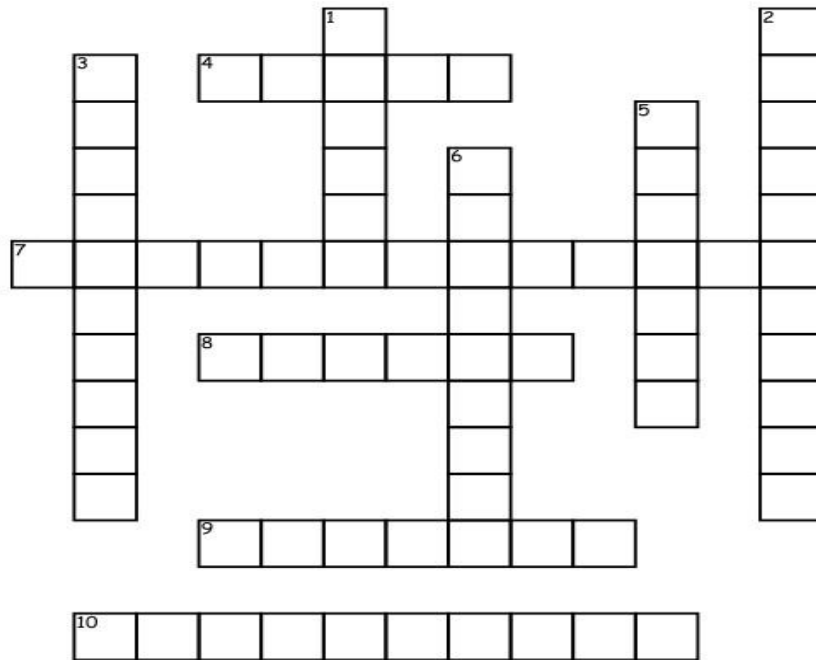
  1. **NELSON MANDELA   2. ANNIE BESANT**
    ➢ Solve the CROSSWORD PUZZLE on Nelson Mandela

Nelson Mandela

Across
4. Education can change the
7. The name I was given by my teacher
8. I devoted my time and campaigned for civil
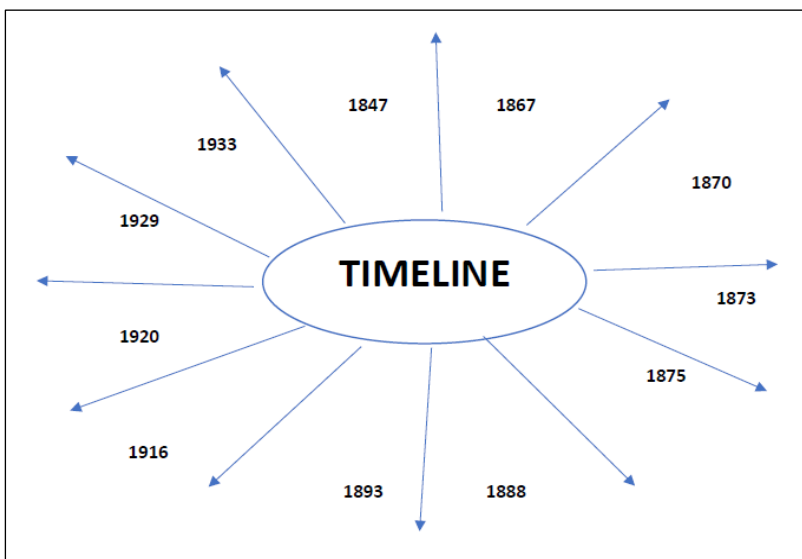**9.** My autobiography is called; The Long walk to

10. My name at birth

Down
1. I spent 27 years in
2. Became first black president in
3. I won the Nobel
5. We must eradicate
6. Racial segregation is also known as

Word Bank
freedom	prison	South Africa	Apartheid
Rolihlahla	peace prize	Nelson Mandela	rights
poverty	world		

> ➤ **Find information about Annie Besant in the form of time- line**

TIMELINE

1847   1867   1870   1873   1875   1888   1893   1916   1920   1929   1933

P.T.O

ACTIVITY 2

Write an article on the following topic. Take the reference from the chapter '(in 100-120 words) Ref. Nelson Mandela: A Long Walk to Freedom)

> **How Nelson Mandela changed Black history.**

ACTIVITY 3

Read any two books of your choice and add in your writing skill the following for each book:

> Write a statement giving essential information about the book: title, author, first copyright date, type of book, general subject matter, special features, price. etc.

> What genre is the book? Is it fiction or nonfiction?

> Start with a couple of sentences describing what the book is about…

> State the author's purpose in writing the book.

> Who is the intended audience?

> Think about how you were affected by the book and if any of your opinions or feelings change because of it…

> Discuss what you particularly liked about the book.

> Mention anything you disliked about the book. ...

> If it is fiction, how interesting is the plot? / How well does the author create mood through setting? / Is there a primary conflict in the book? How does this develop over thecourse of the text?

> You can give the book a rating, for example a mark out of five or ten, number of stars out offive stars if you like!

You may use these kinds of graphic organizers to outline your Book review for fiction ornon-fiction…

विषय-हिंदी

सामान्य निर्देश :

1. समस्त कार्य आंतरिक मूल्यांकन के अंतर्गत आकंलन किया जाएगा।

2. समस्त कार्य आकर्षक सृजनात्मक और प्रस्तुति योग्य होना चाहिए।

3. समस्त कार्य का अंक परीक्षा में जोड़े जाएंगे।

प्रश्न 1. ग्रीष्मकाल मे आप अपना समय को किन चीज़ों में व्यतीत करना चाहेंगे ?

इस विषय पर आप अपने विचार प्रस्तुत कीजिये।

प्रश्न 2. "कबीर की साखी" पाठ से प्रेरित होकर समाज में 'परोपकार का महत्तव ' विषय पर लगभग 150 शब्दों का अनुच्छेद लिखिए।

प्रश्न 3. 'प्रदूषण से बचाव और रखरखाव'' विषय पर लगभग 150 शब्दों का अनुच्छेद लिखिए।

प्रश्न 4. प्लास्टिक थैलों पर प्रतिबंध के बावजूद इनके बढ़ते प्रयोग पर अधिकारियों का ध्यान आकर्षित करते हुए अपने क्षेत्र के प्रमुख समाचार पत्र के संपादक के नाम एक पत्र लिखिए।

प्रश्न 5. ग्रीष्मकाल के दौरान आपके द्वारा की गयी यात्रा का लगभग 200 शब्दों में वर्णन कीजिये।

प्रश्न 6. कोई भी एक आप-बीती घटना जो आपके जीवन को रोमांचित करती है,लगभग 200 शब्दों में लिखिए।

प्रश्न 7. पाठ्यपुस्तक विक्रेता से पुस्तकें मँगवाने हेतु पुस्तक विक्रेता को पत्र लिखिए।

प्रश्न 8. अपनी एक स्वरचित कविता लिखिए।

प्रश्न 9. ग्रीष्मकाल में जगह-जगह पानी की समस्या देखने को मिलती है। आपके क्षेत्र की समस्या से संबन्धित एक लघुकथा लिखिए।

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MATHEMATICS

SECTION- A

1. Write whether every positive integer can be of the form $4q + 2$, where q is an integer. Justify your answer.

2. "The product of two consecutive positive integers is divisible by 2". Is this statement true or false? Give reasons.

3. "The product of three consecutive positive integers is divisible by 6". Is this statement true or false"? Justify your answer.

4. Write whether the square of any positive integer can be of the form $3m + 2$, where m is a natural number. Justify your answer.

5. A positive integer is of the form $3q + 1$, q being a natural number. Can you write its square in any form other than $3m + 1$, i.e., $3m$ or $3m + 2$ for some integer m? Justify your answer.

6. Show that the square of an odd positive integer is of the form $8m + 1$, for some whole number m.

7. Show that the square of any positive integer is either of the form $4q$ or $4q + 1$ for some integer q.

8. Show that cube of any positive integer is of the form $4m, 4m + 1$ or $4m + 3$, for some integer m.

9. Show that the square of any positive integer cannot be of the form $5q + 2$ or $5q + 3$ for any integer q.

10. Show that the square of any positive integer cannot be of the form $6m + 2$ or $6m + 5$ for any integer m.

11. Show that the square of any odd integer is of the form $4q + 1$, for some integer q.

12. If n is an odd integer, then show that $n^2 - 1$ is divisible by 8.

13. Prove that if x and y are both odd positive integers, then $x^2 + y^2$ is even but not divisible by 4.

14. Show that the square of an odd positive integer can be of the form $6q + 1$ or $6q + 3$ for some integer q.

15. Show that the cube of a positive integer of the form $6q + r$, q is an integer and $r = 0, 1, 2, 3, 4, 5$ is also of the form $6m + r$.

16. Prove that one and only one out of n, $n + 2$ and $n + 4$ is divisible by 3, where n is any positive integer.

17. Prove that one of any three consecutive positive integers must be divisible by 3.

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18. For any positive integer n, prove that $n^3 - n$ is divisible by 6.

19. Show that one and only one out of n, $n + 4$, $n + 8$, $n + 12$ and $n + 16$ is divisible by 5, where n is any positive integer.

20. Show that the product of three consecutive natural numbers is divisible by 6.

21. Show that any positive odd integer is of the form $6q + 1$ or $6q + 3$ or $6q + 5$ where $q \in Z$.

22. Show that any positive even integer is of the form $6q$ or $6q + 2$ or $6q + 4$ where $q \in Z$.

23. If a and b are two odd positive integers such that a>b, then prove that one of the two numbers $\frac{a+b}{2}$ and $\frac{a-b}{2}$ is odd and the other is even.

24. Using Euclid's division algorithm to show that any positive odd integer is of the form 4q+1 or 4q+3, where q is some integer.

25. Using Euclid's division algorithm, find the largest number that divides 1251, 9377 and 15628 leaving remainders 1, 2 and 3, respectively.

26. Using Euclid's division algorithm, find which of the following pairs of numbers are co-prime:
(i) 231, 396   (ii) 847, 2160

27. Show that 12^n cannot end with the digit 0 or 5 for any natural number n.

28. In a morning walk, three persons step off together and their steps measure 40 cm, 42 cm and 45 cm, respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps?

29. A circular field has a circumference of 360 km. Three cyclists start together and can cycle 48, 60 and 72 km a day, round the field. When will they meet again?

30. Find the smallest number which leaves remainders 8 and 12 when divided by 28 and 32 respectively.

31. Find the greatest numbers that will divide 445, 572 and 699 leaving remainders 4, 5 and 6 respectively.

32. Find the greatest number which divides 2011 and 2423 leaving remainders 9 and 5 respectively

33. Find the greatest number which divides 615 and 963 leaving remainder 6 in each case.

34. Find the greatest number which divides 285 and 1249 leaving remainders 9 and 7 respectively.

35. Show that the number of the form 7^n, n $\in$ N cannot have unit digit zero.

36. Explain why $3 \times 5 \times 7 + 7$ is a composite number.

37. Can two numbers have 18 as their HCF and 380 as their LCM? Give reasons.

38. Prove that $\sqrt{2}$ is an irrational number.

39. Prove that $5 - \sqrt{3}$ is an irrational number.

SECTION- B

Art Integrated Activity: Construct the square root spiral in Mathematics Lab Notebook. (Refer to NCERT Class-IX Chapter 01)

SCIENCE

General Instructions
1. This Assignment is divided in two parts A and B
2. PART A *Art Integrated Project* to be done in a scrap book
3. PART B Do in stick files and chart paper or in white A4 page as per instruction

PART A
Art Integrated Project*

1. Locate in the outline map of India any 5 major Products and Industries of the States of Gujarat and Chhattisgarh and then categorize them under different groups. [tensile strength, composition and resources]

Task to be accomplished;-
1. Designing of out- look of scrap book
2. Collect the pictures and name of major manufacturing products and industries.
3. Basic principles involves in the process of manufacturing.
4. Area/ place belong to the manufacturing.
5. Conclusion

OR

Compare the ecological impact of wild life of Gujarat and Chhattisgarh. Compare the wild   life of species/ forest resources of both the states and show in graph/picture/table/ map.:-

Task to be accomplished;-
1. Collect data about the ecosystems.
2. Wild life of the Gujarat and the Chhattisgarh
3. Flora and Fauna
4. Endangered, Vulnerable and extinct species

PART B
To be done in stick file/chart paper/in white A4 page (as per specific instructions)

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PHYSICS

1. How many types of images are formed by a concave mirror and convex mirror show by ray diagrams? What are the different uses of both kinds of mirrors?

    What to do:

    a. With reference to the content given in NCERT, draw the images formed by a concave mirror for the various position of the objects

    b. Write their uses with picture well explaining its use.

    Where to do:

    On a chart paper/ A4 – size paper.

Parameters:

a. Relevance and ideas   2. Neatness   3. Presentation   4. Use of resource.

2. Use your own ideas and make a collage or Chart of different famous scientists with their contribution to physics (Gallileo, Einsteen, Hertz, Marconi, Rutherford and many more noble prize winners in physics)

3. Make a list of Inventions and their inventors in you notebook (Not less than 25 inventors name)

4. Write the causes and differences between Myopia and Hypermetropia.

5. Write all the sign conventions for spherical mirror and it's diagram from the NCERT text book.(Page no. 168).

6. Using basic concepts of physics, Make a working model on any renewable resources of energy.

Solar Cooker, wave energy, Wind energy, Geothermal energy Biogas plant, Tidal Energy, nuclear energy

What to do: To make a working model using easily available things

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BIOLOGY

1. Questionnaire framing:-

   a. How to do:-

   Read the Lesson-6 [NCERT] Science, Class-10, "Life Processes" Page 98 to 100 carefully.

   b. What to do:-

   i. Prepare 10 multiple choice questions of different varieties and 5 very short questions with their best possible answers.

   ii. Draw a Well labeled diagram for your Reading content.

2. Prepare a word puzzle games on the above topic.

3. Collect the wrapper of any 6 packaged/processed food product and go through the food information printed on it.

   a) Make a list of different types of chemical food preservatives used.

   b) What are the advantages and disadvantages of food preservatives? How do they affect our digestive system?

   Where to do: Use A-4 Size sheet.

   Parameters- Accuracy, content and quality.

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P.T.O

CHEMISTRY

1. Questionnaire making:-

   *What is Expected from you:-

     a) How to do:- Go through the lesson "Chemical Reaction and Equations" carefully in detail .

     b) What to do:-

     (i) Prepare 10 questions out of the reaction topics that you think is important.   (MCQ Type)

     (ii) Observe your surrounding and explain the reactions taking place in your surroundings.

2. Prepare a report on the "useful and harmful reactions" taking place around us mentioning their types and causes (any five).

3. Prepare a Domino of chemical changes and equations taking 10 variations of different types of reactions with artistic effect and creativity.

   a) Where to do: - Use A-4 Size sheet.

   b) Parameters- Accuracy, content, quality & Creativity.

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SOCIAL SCIENCE

THEME: Project on Integrating "Chhattisgarh with Gujarat under **Ek Bharat – Shreshtha Bharat**"

TOPIC: ART INTEGRATED PROJECT.

OBJECTIVE: The overall objective of the Art Integrated Activity is to help students gain an insight and pragmatic understanding of the theme. It should also help in enhancing the Life Skills of the students. Project is also to understand the Geographical Location, History, Climate, culture, Heritage sites and famous places to visit in Chhattisgarh and Gujarat.'

ACTIVITY: Prepare a project on Integrating Chhattisgarh with Gujarat with reference to following points:

  a) Geographical location of Chhattisgarh and Gujarat
  b) History of Chhattisgarh and Gujarat
  c) Climate of Chhattisgarh and Gujarat
  d) Famous Historical Places in Chhattisgarh and Gujarat
  e) Festivals of Chhattisgarh and Gujarat

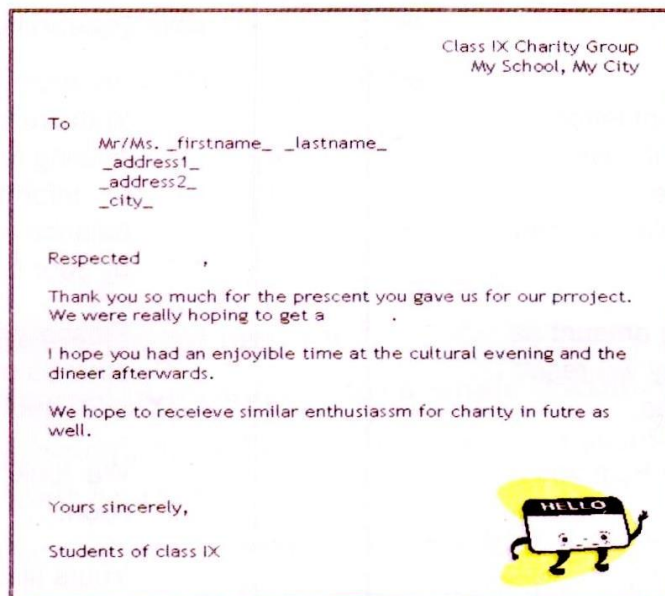**Things to be kept in mind while doing this project:**

- o Use A-4 size file paper (one side ruled).
- o For headings and subheadings use sketch pen.
- o Project must be handwritten (use blue/black ink only)
- o Design the cover page which should reflect the topic. (use your creativity)
- o Mention the Topic of the project, Name, class & section and roll No. on the cover page in bold letters.
- o Project can be in your writing in project file
- o Avoid using plastic covers and use ecofriendly materials.
- o Use drawings, charts, pictures, newspaper cuttings to make your project look attractive, and presentable.

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INFORAMTION TECHNOLOGY

1. Make a PowerPoint presentation on any of the given topics. Take the printout and attach it in your

   Practical file:

   1. Effective communication

   2. Entrepreneurial Skills

2. Create a template for a formal letter to some government authority. Take screen shot and take the printout   and attach it in your Practical file.

3. Your class organized a cultural evening and a dinner, tickets of which were sold to raise amount for charity works. After the event, you want to personally thank each donor. For this you have to frame a letter somewhat like the one shown below.

   Carefully go through it and follow the instruction given below:

   a. Type the letter as shown above and save the file as 'Charity.odt' on your machine area.

   b. Create a database to hold the first name, last name, address1, address2 and city of all the donors who attended the cultural evening.

   c. Now create placeholders for first name, last name, address1, address2 and city.

   d. Merge letter text with actual data and take print out.

4. Crate a paragraph style namely 'document settings' with these settings. Take screen shot and take the

    print out and attach it in your Practical file..

   Font name- Vardana;   Font Size – 14;   Font color – Blue;

   Line Spacing – 1.5 lines;   before and after paragraph – 0.06''

S.No.	Teacher's Name	E-Mail ID
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4	Mr.Ankit Chandrikapure	ankit.chandrikapure@academicworld.co.in
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30	Ms. Asha Sharma	Asha.sharma@academicworld.co.in