SUMMER VACATION ASSIGNMENT
Class X

ENGLISH

ART INTEGRATED PROJECT

Celebrated Craftsmanship of Lakshadweep And Andaman Nicobar Islands

The Andaman and Nicobar Islands is the best place to collect different handicraft items from different places to decorate interior or to keep them as a treasure. The specialty of the Andaman and Nicobar Islands not only can be seen in their scenic beauty but also can be found in the crafted items made by the local peasants.

Explore the varied handicrafts of Andaman and Nicobar Islands and on the basis of your observation and research develop a printable and attractive presentation to derive the analytical cum comparative study of the same with reference to the chapter 'Glimpses of India' from the book 'First Flight.
PPT (Celebrated Craftsmanship of Lakshadweep And Andaman Nicobar Islands) should include slides presenting:
1. Different handicrafts (Palm mats, Woodcrafts, Jewellery, Furniture Making, Shell Craft) of Lakshadweep and Andaman Nicobar Islands
2. Biodiversity richness of Lakshadweep and Andaman Nicobar Islands
3. Demography and Culture of Lakshadweep Islands.
4. Interesting unknown facts about Lakshadweep and Andaman Nicobar Islands
5. The tourism industry can bring valuable income to Lakshadweep and Andaman Nicobar Islands. Using your ideas along with the hints given below, write a letter to the editor of a popular daily on how the government and the public can boost the development of this industry. You are Rama/Ram, 4 Rani Road, Ranchi.
Hints: * Potentiality of tourism industry * a money-spinner * India—not among the top ten countries * the peaceful Himalayas, valleys, hill stations, rich wildlife of Andaman Nicobar Islands *Galathea National Park, Mahatma Gandhi Marine National Park, Rangat * enhanced infrastructure attracts tourists.
6. Colourful Sketch on the handicraft of Andaman Nicobar Islands.
(*Sketch to be filed* sample pictures given below)

Presentation should consist of 6-7 slides excluding Introduction, Resource and Team list Slides.

MATHEMATICS

<u>PROJECT WORK</u>

Coconut Shell and Sea Shell Crafts are based on different Geometrical Shapes (Spheres, Hemispheres, Cylinders etc.) and Mathematical Designs (Similarity, Congruency, Patterns etc.) can be represented in these crafts.

<u>Instructions:</u>
 (1) Draw, colour and label different geometrical shapes (2D/ 3D) that you observe. (Any 5)
 (2) Each student will prepare the Power Point Presentation on the above topic.
 (3) Samples of Coconut Shell and Sea Shell Crafts are given below:

SCIENCE

1. Make an informative and attractive brochure informing people about the mangrove forests/coral reefs (any one) of Andaman & Nicobar Islands and Lakshadweep. Make sure to mention the following points:

   i.   Threats to these forest/reefs

   ii.   Methods for conservation

   The brochure should include bright and colourful pictures.

2. Write a catchy slogan on the following topics according to your Roll Nos
   (a) Save trees, Save future generations(Roll No. 1 to 10)
   (b) Conserve water, Conserve life (Roll No. 11 to 20)
   (c) Conservation of Natural resources (Remaining students)

3. Make a poster on the following topics according to your Roll Nos
   (a) Save Power and drive away darkness (Roll No.1to10)
   (b) Reproductive Health –Problems and Strategies (Roll No. 11 to 20)
   (c) One Organ donor can save 8 lives (Remaining students)

4. Attempt the crossword puzzle given at the end of this homework. (Answer on a printout of the puzzle)

5. Answer the following questions in their respective notebooks:

PHYSICS

1. Draw a labelled ray diagram to show the path of the reflected ray corresponding to an incident ray of light parallel to the principal axis of a convex mirror. Mark the angle of incidence and angle of reflection on it.

2. If the image formed by a spherical mirror for all positions of the object placed in front of it is always erect and diminished, what type of mirror is it? Draw a labelled ray diagram to support your answer.

3. An object is placed at a distance of 30 cm in front of a convex mirror of focal length 15cm. Write four characteristics of the image formed by the mirror.

4. Name the type of mirrors used in the design of solar furnaces. Explain how high temperature is achieved by this device.

5. AB and CD, two spherical mirrors, from parts of a hollow spherical ball with its center at O as shown in the diagram. If arc AB = 12 arc CD, what is the ratio of their focal lengths? State which of the two mirrors will always form virtual image of an object placed in front of it and why?

6. The linear magnification produced by a spherical mirror is +1/3. Analyzing this value, state the
   (i)   type of mirror and
   (ii)   position of the object with respect to the pole of the mirror. Draw any diagram to justify your answer.

7. A concave mirror has a focal length of 20 cm. At what distance from the mirror should a 4 cm tall object be placed so that it forms an image at a distance of 30 cm from the mirror? Also calculate the size of the image formed.

8. The image of a candle flame placed at a distance of 30 cm from a mirror is formed on a screen placed in front of the mirror at a distance of 60 cm from its pole. What is the nature of the mirror? Find its focal length. If the height of the flame is 2.4 cm, find the height of its image. State whether the image formed is erect or inverted.

9. The image formed by a spherical mirror is real, inverted and its magnification is -2. If the image is at a distance of 30 cm from the mirror, where is the object placed? Find the focal length of the mirror. List two characteristics of the image formed if the object is moved 10 cm towards the mirror.

10. A spherical mirror produces an image of magnification -1 on a screen placed at a distance of 50 cm from the mirror.
    (a) Write the type of mirror.
    (b) Find the distance of the image from the object.
    (c) What is the focal length of the mirror?
    (d) Draw the ray diagram to show the image formation in this case.

11. A student wants to project the image of a candle flame on a screen 48 cm in front of a mirror by keeping the flame at a distance of 12 cm from its pole.
    (a) Suggest the type of mirror he should use.
    (b) Find the linear magnification of the image produced.
    (c) How far is the image from its object?
    (d) Draw ray diagram to show the image formation in this case.

12. An object 4.0 cm in size, is placed 25.0 cm in front of a concave mirror of focal length 15.0 cm.
    (i)   At what distance from the mirror should a screen be placed in order to obtain a sharp image?

(ii)   Find the size of the image.

(iii)   Draw a ray diagram to show the formation of image in this case.

13. a) A concave mirror of focal length 10 cm can produce a magnified real as well as virtual image of an object placed in front of it. Draw ray diagrams to justify this statement.

(b) An object is placed perpendicular to the principal axis of a convex mirror of focal length 10 cm. The distance of the object from the pole of the mirror is 10 cm. Find the position of the image formed.

14. a) A security mirror used in a big showroom has radius of curvature 5 m. If a customer is standing at a distance of 20 m from the cash counter, find the position, nature and size of the image formed in the security mirror.

(b) Neha visited a dentist in his clinic. She observed that the dentist was holding an instrument fitted with a mirror. State the nature of this mirror and reason for its use in the instrument used by dentist.

15. It is desired to obtain an erect image of an object, using concave mirror of focal length of 12 cm.

(i)   What should be the range of distance of a, object placed in front of the mirror?

(ii)   Will the image be smaller or larger than the object? Draw ray diagram to show the formation of image in this case.

(iii)   Where will the image of this object be, if it is placed 24 cm in front of the mirror? Draw ray diagram for this situation also to justify your answer.

Show the positions of pole, principal focus and the center of curvature in the above ray diagrams.

CHEMISTRY

1. 1.Balance the following chemical equation:
    (a)$Fe(s) + H_2O(g) \rightarrow Fe_3O_4 (s) + H_2 (g)$
    (b) $Al(s) + CuCl_2 (aq) \rightarrow AlCl_3 (aq) + Cu(s)$

2. Write a balanced equation for the chemical reaction that can be characterized as precipitation reaction.

3. Define and Give an example of double displacement reaction (only with complete balanced equation).

4. Write the essential condition for the following reaction to take place:
    $$2AgBr \rightarrow 2Ag + Br_2$$
    Write application of this reaction.

5. Consider the following chemical equation:
   X + Barium chloride $\rightarrow$ Y(White ppt) + Sodium chloride
    Identify (a) X and Y (b) The type of reaction.

6. a. What is colour of ferrous sulphate crystals? How does this colour change after heating?
    b. Name the products formed on strongly heating ferrous sulphate crystals. What type of chemical reaction occurs in this change?

7. Why do we store silver chloride in dark colored bottle? Explain in brief.

8. An aqueous solution of metal nitrate 'P' reacts with sodium bromide solution to form yellow precipitate 'Q' which is used in photography. 'Q' on exposure to sunlight undergoes decomposition to form metal present along with a reddish-brown gas. Identify 'P' and 'Q'. Write the balanced chemical equation for the chemical reaction. List the two categories in which reaction can be placed.

9. Write the balanced chemical equations for the following chemical reactions:
   a. Hydrogen + Chlorine ⟶ Hydrogen Chloride
   b. Lead + Copper Chloride ⟶ Lead chloride + Copper
   c. Zinc oxide + Carbon ⟶ Zinc + Carbon Monoxide

10. Write the chemical equation of the reaction in which the following changes take place with an example of each.
    a. Change in colour
    b. Change in temperature

BIOLOGY

1. Following is true for heterotrophs
   a. Heterotrophs' survival depends directly or indirectly on autotrophs
   b. Heterotrophic organisms include animals and fungi
   c. In heterotrophs, complex substances have to be broken down into simpler ones
   d. All of the above

2. Carbon and energy requirements of the autotrophic organism are fulfilled by
   a. Enzymes
   b. Photosynthesis
   c. Bacteria
   d. none of the above

3. _____ are utilised for providing energy to the plant \
   a. Carbohydrates
   b. Vitamins
   c. Proteins
   d. fats

4. The following event(s) occur during photosynthesis
   a. Absorption of light energy by chlorophyll
   b. Conversion of light energy to chemical energy
   c. Reduction of carbon dioxide to carbohydrates
   d. All of the above

5. Chlorophylliscontainedin
   a. Leaf
   b. Stem
   c. Roots
   d. both a. and b.

6. Tiny pores present on the surface of the leaves are known as
   a. Stomata
   b. Chloroplast

Crossword Puzzle
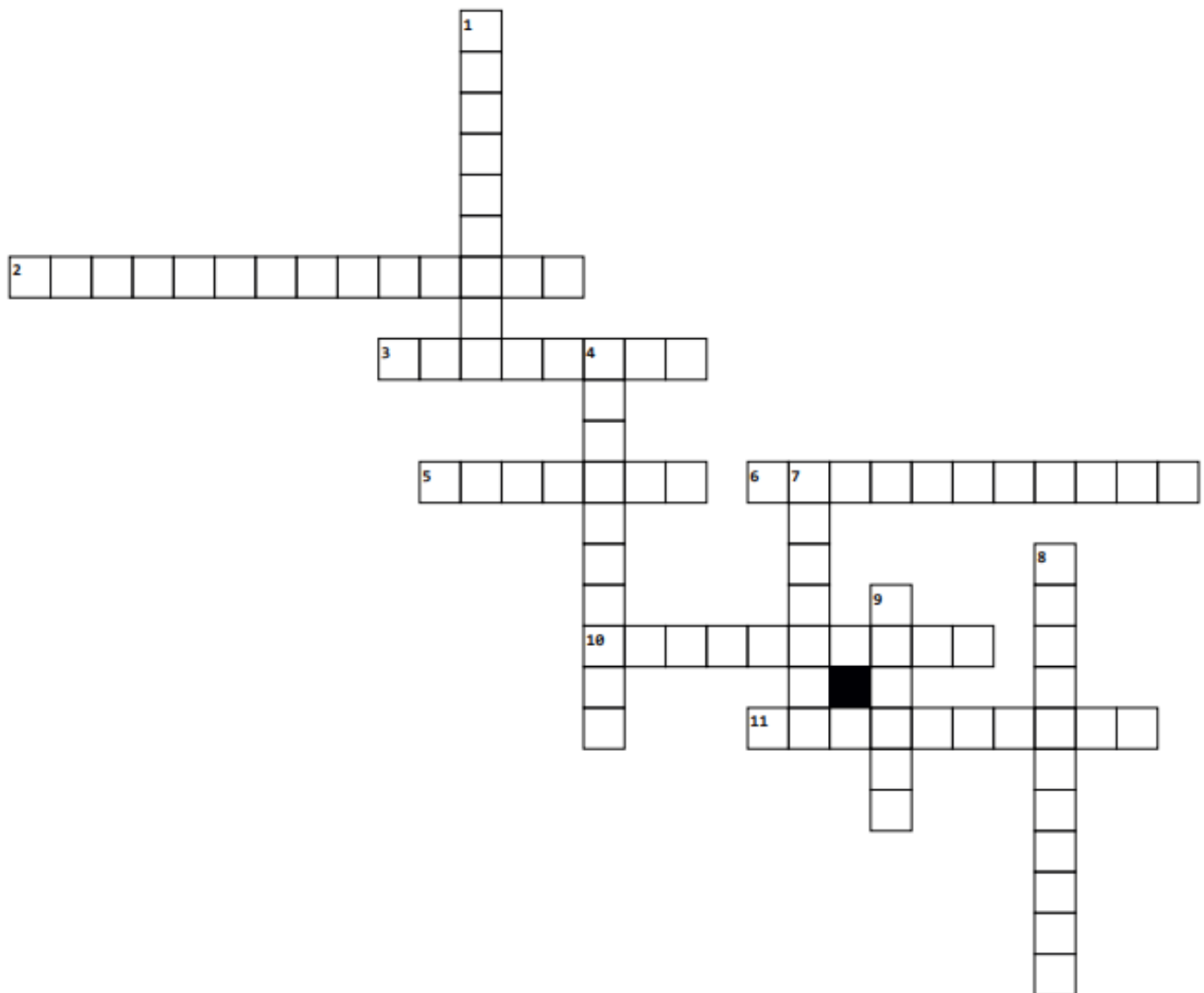
Across

2. Part of the digestive system that absorbs nutrients

3. Organ responsible for producing insulin

5. One of the organs responsible for breaking down food

6. The organ responsible for storing bile

10. The process of breathing in air

11. The process of converting food into energy

Down

1. The process of breaking down food into smaller molecules

4. The process of breathing out air

7. An enzyme that breaks down starch

8. Glucose is broken down in this process

9. Chemical substance that breaks down fats

1.PROCEDURE:
The coastal ecosystem of Andaman – Nicobar & Lakshadweep islands are demarcated due geomorphological features & biotic components. By choosing it as a centre of attraction to the place make a brochure on A4 size sheet to promote tourism in the particular region . You can use pictures and introduce some interesting packages to attract tourist.

2. Make a project on Consumer Rights. Your project should include the following things:

i) A4 size sheets 25-30.

ii) Information on Consumer Rights.

iii) A slogan on Consumer Rights.

iv) A poster on Consumer Rights/ A cartoon for awareness.

SOCIAL - SCIENCE

AIA ACTIVITY: BROCHURE MAKING

1.PROCEDURE:
The coastal ecosystem of Andaman – Nicobar & Lakshadweep islands are demarcated due geomorphological features & biotic components. By choosing it as a centre of attraction to the place, make a brochure on A4 size sheet to promote tourism in the particular region . You can use pictures and introduce some interesting packages to attract tourist.

2. Make a project on Consumer Rights. Your project should include the following things:

i) A4 size sheets 25-30.

ii) Information on Consumer Rights.

iii) A slogan on Consumer Rights.

iv) A poster on Consumer Rights/ A cartoon for awareness.

AI

1. Make a presentation covering the following topics:

    a. How AI can help improve tourism in Andaman & Nicobar Islands?

    b. How AI can help improve the state of Living of the people living in Andaman & Nicobar Islands?

    c. How AI can Help improve Healthcare industry in Andaman & Nicobar islands?

    -   Presentations can be in video format.(you can use any software)

2. Make a Chart on the below given themes:

   a. AI – A threat to the human Race

   b. AI – The future of travel

ART
- Prepare a colourful paper bag based on Andaman Nicobar Tourism. (Roll no. 1-15)
- Prepare A3 size envelope and design it on the theme of Lakshadweep islands and beaches (Roll No. 16 and above)

1॰ लक्षद्वीप, अण्डमान और निकोबार के दस पर्यटक स्थलों पर आधारित P॰P॰T॰ तैयार कीजिए।

2॰ कला समेकित परियोजना कार्य -

1- आभूषण, सजावट की वस्तुएँ, पुस्तक चिन्ह (Book mark), मुखौटा (Mask), पंचांग (Calender) आदि किसी एक पसंदीदा विषय को चुनकर परियोजना कार्य कीजिए ।

2- जी-20 अथवा हिन्दी विषय (पाठों पर अथवा व्याकरण पर) आधारित एक सुंदर चार्ट तैयार कीजिए ।

3- कारगिल युद्ध में शहीद हुए भारतीय सैनिकों पर एक कोलाज बनाइए ।