



**Bal Bharati**  
PUBLIC SCHOOL  
Sector-21, Noida, G.B. Nagar

# SUMMER HOLIDAY HOMEWORK (2022-23)

## CLASS - X

### ENGLISH



- Read the chapter Glimpses of India from 'First Flight'
- Take up any state of India and make a PPT on its Culture, Climate, Soil, Crops, Festivals, Traditional Dresses, Cuisine etc. Include handmade sketches and computer graphics.
- You may also make a collage of the pictures and sketches



### 2. Integration with Biology: Soil-ology – Keep Soil Alive!

Create a Word Bank of all the words related to soil. Categorize them into various Parts of Speech and Figures of Speech. For example- The sofa is fertile soil for a couch potato.

### हिंदी

### शिक्षण अधिगम

- भाषिक कौशलों का विकास
- साहित्य का रसास्वादन
- रचनात्मकता संबंधी मौलिक योग्यता में वृद्धि
- चिंतन-मनन की क्षमता का विकास
- भाव-पल्लवन
- जीवन-मूल्यों की प्रतिष्ठा
- कल्पनाशीलता व सृजनात्मकता में अभिवृद्धि



जिस प्रकार आपकी पाठ्यपुस्तक में अंदमान-निकोबार की लोककथा के आधार पर प्पाठ . तताँरा-वामीरो कथा है उसी प्रकार किसी अन्य लोककथा को आधार बनाकर लघु-कथा (लगभग 80-100 शब्दों में) चित्रांकन करते हुए व्याकरण-काँपी में लिखें। (कला के साथ एकीकृत गतिविधि)

- लेखिका मालती जोशी की कहानियों का (प्रतिदानर कोख का दर्प तथा मोह-भंग) पठन-पाठन करें।
- पठित पाठों का स्वाध्ययन करें तथा प्रमुख बिंदुओं को लिपिबद्ध करें। यदि चित्रांकन, कॉमिक रूप में प्रस्तुतीकरण कर सकते हैं, तो अवश्य करें।

## संस्कृत

1. अरुणाचल प्रदेश: /मेघालय: वा इत्येतयोः यात्राम् वर्णयन् तत्रत्यानि दर्शनीयस्थलानि संस्कृतिम् च वर्णयन् नव-दश वाक्येषु अनुच्छेदम् संस्कृतेन लिखत । सम्बन्धितम् चित्रम् अपि रचयत  
| (A-4/A-3 Size Pastel Sheet )  
(एक भारत श्रेष्ठ भारत गतिविधि)



2. गूगल क्लासरूम पर अपलोड की गई सभी कार्यपत्रिकाओं का कार्य पूरा करें ।
3. रूप याद करें-  
शब्दरूप- विद्वस्, गुणिन्, मातृ, पितृ, साधु, मति, नदी, (किम्, यत्, इदम् - तीनों लिंगों में)  
धातुरूप- गम्, भू, पा, दृश्, अस् (पाँचों लकार में)
4. श्लोक-गायन गतिविधि हेतु 15 श्लोक अर्थ सहित याद करें ।

## FRENCH

Les devoirs des vacances d'hiver

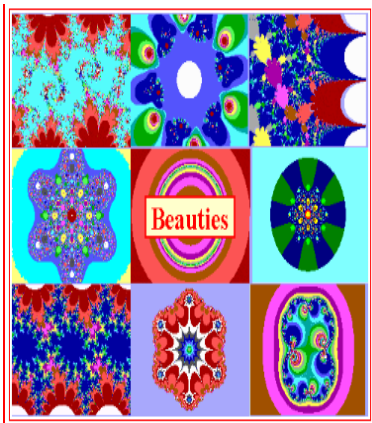


Ecrivez le synopsis d'un film en français (au moins 80 mots).

## MATHEMATICS

### 1. Art Integrated Project: Fractal Geometry

Topic of the project



Art form

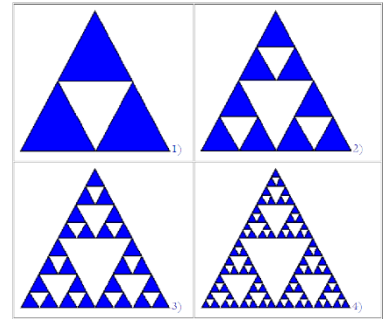
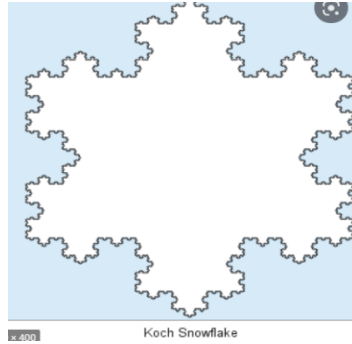
#### **Fractal Geometry –**

Most physical systems of nature and many human artefacts are not regular geometric shapes of the standard geometry derived from Euclid. Fractal geometry offers almost unlimited ways of describing, measuring and predicting these natural phenomena. A **fractal** is "a rough or fragmented **geometric** shape that can be split into parts, each of which is (at least approximately) a reduced-size copy of the whole," a property called **self-similarity**.

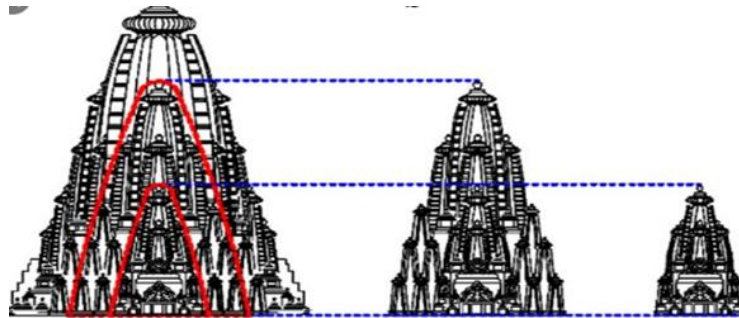
What does self-similarity mean? If you look carefully at a fern leaf, you will notice that every little leaf - part of the bigger one - has the same shape as the whole fern leaf. You can say that the fern leaf is self-similar. The same is with fractals: you can magnify them many times and after every step you will see the same shape, which is characteristic of that particular fractal.

#### **Sierpinski Triangle**

This is the fractal we can get by taking the midpoints of each side of an equilateral triangle and connecting them. The iterations should be repeated an infinite number of times. The pictures below present four initial steps of the construction of the Sierpinski Triangle:



## Fractals in Architecture



## Fractals in Nature



Subjects integrated

Learning  
Objectives

Maths & Art

Students will be able to

- understand the beautiful Mathematical pattern- Fractal Geometry.
- create awareness about the different art forms in nature.
- improve their cognitive abilities.
- Integrate Maths with different art forms.

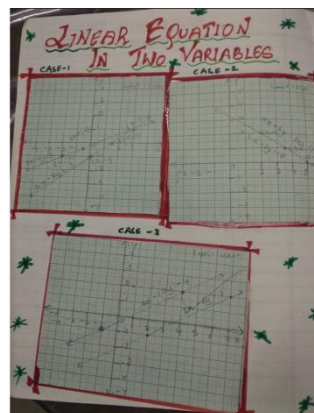
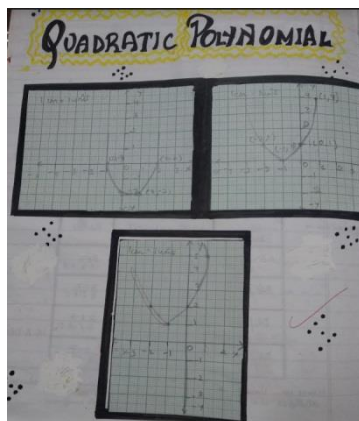


Basic Knowledge of the project:	Basic ideas of Similarity and the properties of similar figures.
About the activity	<p>Students should</p> <ul style="list-style-type: none"> <li>➤ Know about similar figures.</li> <li>➤ Find out the application of Fractal Geometry in nature.</li> <li>➤ Study the Mathematical concept involved in the beautiful design.</li> <li>➤ collect all datas with photographs to prepare a project report.</li> </ul>
Project Presentation	<ul style="list-style-type: none"> <li>• Students need to complete the project in groups of 5 students.</li> <li>• Presentation of the Project could be through PPT or by video.</li> </ul>

## 2. **Subject Enrichment Activity:**

Maths lab activities on the following topics are to be completed in Maths Lab Manual.

- To obtain the condition of consistency for a system of linear equations in two variables by graphical method.
- To find out the number of zeroes of a quadratic polynomial by graphical method.



## 3. **Assignment .**

Maths assignment sheets are to be completed for the following topics

- Real Numbers
- Polynomials
- Pair of Linear Equations in two variables.

## PHYSICS



- Make a working model demonstrating the phenomenon associated with light (reflection/ refraction/ scattering/ dispersion etc.)
- Complete the assignment for the month of May-June, which will be uploaded on Google Classroom.
- Click at least 3 real and natural photographs showing the 3 different phenomenon of Light. Paste its print outs (preferably coloured)/ photograph in your Physics notebook and explain the Physics phenomenon involved in each photograph.

## **CHEMISTRY**

### **1. RECOGNIZING LAB SAFETY SIGNS.**



Safety in chemistry laboratory is of paramount importance as the conduct of experiments may involve use of hazardous chemicals . Identify the safety signs used in the lab. Prepare a quiz or a crossword puzzle based on the safety signs .

2. Identify and name some redox reactions occurring naturally . What is the relation between substances oxidised , reduced , oxidising agent and reducing agent. Explain this taking examples of chemical reactions given in your NCERT textbook.

3. Learn the reactivity series of Metals .

4. Complete the critical thinking worksheet based on Chemical Reactions and Equations in your chemistry register.

## **BIOLOGY**

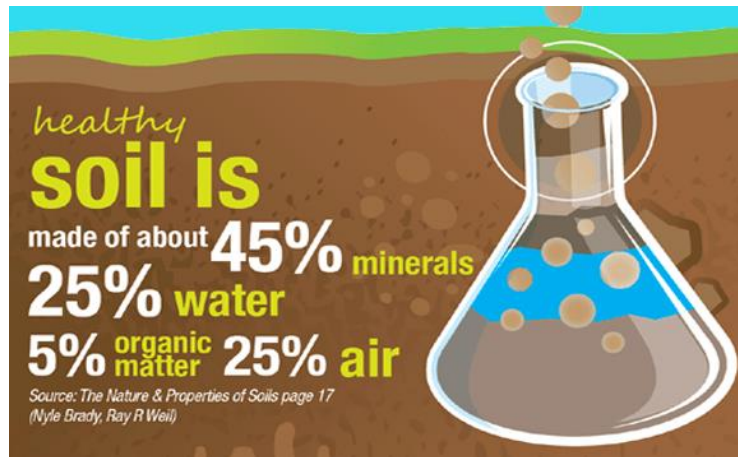
**a) Complete the recording of experiment as discussed (and material link provided) in your biology practical file.**

<https://amrita.olabs.edu.in/?sub=79&brch=16>

1. To Prepare a temporary stained mount of a leaf peel to show stomata.

**b) Soil-Ology - Keep Soil Alive!**

**The soil is the great connector of lives, the source and destination of all."**



Did you know that one tablespoon of a healthy soil has more organisms in it than there are people on Earth?! Yes, soil is the most diverse ecosystem on this planet. Interesting, right?! Soil is a natural body made up of mineral, air, water, organic matter and lots of living organisms. It's hard to believe but without soil, the Earth's land would be a lifeless slab of rock!

Millions and millions of microorganisms present in the soil interact with plants in fascinating ways. Communities of trees are interconnected by an underground network of Mycorrhizae (fungi that live symbiotically between and within plant roots). This network not only transfers water and minerals to other plants, but also chemicals that help plants to communicate with one another! Just like humans communicate with one another through the network of "internet". Also state the role of natural cleaners, decomposers.

**Prepare a Power point presentation** to explain the importance of soil management for a sustainable living and communicate that, Soil is No Dirt!

**Assessment Parameters –**

1. Cover Page Design 01 Marks

2. Content and Creativity 04 Marks

- ❖ Video links to be inserted and No of slides should not exceed 10.
- ❖ Note that it is your art integrated, interdisciplinary activity with English and Geography as given below-

1. English - Create a Word Bank of all the words related to soil. Categorize them into various Parts of Speech and Figures of Speech. For example- The sofa is fertile soil for a couch potato.
2. Geography -Refer to this Soil Map of India and find out the crops that grow in the region. Prepare a list of crops that a particular kind of soil supports.

**c) Solve the given assignment in Biology Register-**

1. A variegated leaf with green and yellow patches is used for an experiment to prove that chlorophyll is required for photosynthesis. Before the experiment the green portions (A), and the pale yellow portions (B), are observed.



What will be the colour of 'A' just before and after the starch test? Also write the equation of photosynthesis and mark, as well as validate from which molecule the by-product is obtained.

2. The following question consists of two statements ASSERTION (A) and REASON(R), answer these questions selecting the appropriate option given below -

- a) Both A and R are true and R is the correct explanation for A
- b) Both A and R are true and R is not the correct explanation for A
- c) A is true but R is false
- d) A is false but R is true

ASSERTION (A) : The concentration of a chemical increases as trophic level increases due to biological magnification REASON (R): DDT is a harmful chemical

Q.3 (a) What is the ultimate source of energy for the earth?

(b) On the Earth solar energy is trapped by which organisms?

(c) Write a terrestrial food chain comprising mouse. State the trophic level of Mouse in it.

(d) How much energy will be available to the Peacock in the given food chain if the energy trapped by the plants from the sun is 10000J?

Plant -----insect-----frog-----Snake-----peacock



4. A natural phenomenon that becomes harmful due to pollution is \_\_\_\_\_.

- a) Global warming
- b) Ecological balance
- c) Deforestation
- d) Desertification

5. The chemical responsible for ozone holes is \_\_\_\_\_.

- a) CO<sub>2</sub>
- b) SO<sub>2</sub>
- c) CO
- d). CFC

6 Animal dung is \_\_\_\_\_ waste.

- a) Biodegradable
- b) non-biodegradable
- c) Hazardous
- d) Toxic

7. Which of the following is biodegradable?

- a) iron nails
- b) plastic mugs
- c) Paper plates
- d). Donas made of plant leaves

8. Which of the following is non-biodegradable?

- a) Animal bones
- b) Nylon
- c) Tea leaves
- d) Kitchen waste

9. In a lake polluted with pesticides, which one of the following will contain the maximum amount of pesticides?

- a) Small fish
- b) Microscopic animals
- c) Big fish
- d) Water birds

10. Name the process in which a harmful chemical enters the food chain and gets concentrated at each level in the food chain.

- a) Concentration
- b) Biomagnification
- c) Expansion
- d) Pollution

#### **Case Study -**

A newspaper has recently published a survey result which says that number of Covid 19 patients in the country is increasing every day. The report also says that awareness among people about its spread is still very poor. You discussed the newspaper report with your friend and both of you decided to help people to fight against this deadly disease.

(a) What problem do you anticipate if both of you try to educate the people of your community?

(b) What suggestions will you give to control Covid Pandemic?

## HISTORY

### RISE OF NATIONALISM IN EUROPE- UNIFICATION OF ITALY/ UNIFICATION OF GERMANY.

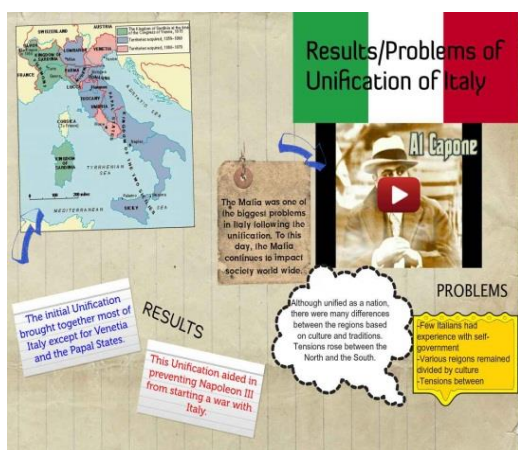
The assignment has to be prepared of 4-5 pages on the **Unification of Italy** or **Unification of Germany**. The assignment must include the reasons for the unification and nationalism within these nations and how the unification brought changes and revolutions in the whole of the European countries.

#### LEARNING OUTCOMES:

- Recognizes the role of Otto Van Bismarck in the unification of Germany.
- Observes the map of Italy and understand the various developments responsible for the unification of Italy.

The assignment must include the following:

- 1) Index
- 2) Maps
- 3) Pictures of Unification
- 4) A good web search



**Unification of Italy**



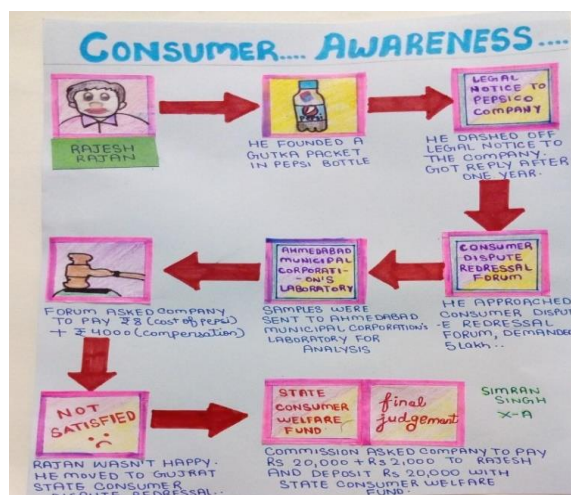
**Unification of Germany**

## ECONOMICS

#### Individual Activity integrated with Fine Arts:

Present a 2 min talk on any one case study on either Consumer Exploitation or Consumer Redressal Process in India in connection with organic products. Support your presentation with any one of the following: sketches /drawings/ comic strip/flowchart (Half of A3 sheet or half of chart paper) for better communication and comprehension.

Few examples of earlier submissions:

[illegible]**FMM**

- Mutual Funds is a Professionally Managed Investment scheme. Prepare a Project on Mutual Fund explaining the importance of it.
- Watch the series Scam 1992 and identify any 15 terms related to the stock market and define them in the FMM register to be discussed in the class .
- Attempt the questions provided in the assignment for the month of May-June in your registers.

Choose any one topic and make a Presentation or Flipbook :

- a). Domain of AI
- b). AI Project Cycle
- c). Applications of NLP

NOTE: THE WEIGHTAGE OF HOLIDAY HOMEWORK IS 20 MARKS IN PRE TERM ASSESSMENT.

## SCHEDULE OF HOLIDAY HOMEWORK SUBMISSION

SUBJECT	DATE
ENGLISH, SANSKRIT & AI	5 JULY 2022
HINDI, FRENCH & FMM	6 JULY 2022
MATHS & PHYSICS	7 JULY 2022
CHEMISTRY & BIOLOGY	8 JULY 2022
HISTORY, GEOGRAPHY & ECONOMICS	11 JULY 2022

**STAY SAFE, STAY HEALTHY.**

AND HAPPY LEARNING 😊 😊 😊