



Summer is a time for fun,
To jump and play in the sun!

Swimming, sandcastles, slip-and-slides,
Bumper cars and thrilling rides!

Summer is a time for fun,
To eat an ice creams and buns!

Camping and amusement parks,
Bright fireworks in the dark!

Summer is a time for fun,
To blow bubbles and catch each one!

Shells, sandals, and the seashore,
Sprinklers, picnics, and completing Homework!






**SUMMER
HOLIDAY HOMEWORK
2022-2023
CLASS -XII**

ENGLISH

A decorative flourish consisting of several elegant, flowing lines that curve and swirl beneath the word 'ENGLISH', adding a classic and artistic touch to the design.

SUBJECT:	ENGLISH (301)
TIME TO BE SPENT (_Hours per day for 15 Days) :	(1 HOUR PER DAY FOR 15 DAYS)
Work Specification:	<p style="text-align: center;">Project-1</p> <ul style="list-style-type: none"> ❖ Prepare a Newspaper comprising one sports news, one political news, two reports and two articles. <p style="text-align: center;">Project-2</p> <ul style="list-style-type: none"> ❖ Read a Novel & write Critical appreciation for the same analyzing the characters and the plot.
Materials Required :	<p><u>Project-1</u></p> <ul style="list-style-type: none"> • Scrap book, Charts , Newspaper, sketch pens & File paper. <p><u>Project-2</u></p> <ul style="list-style-type: none"> • File Paper ,Pictures (ANY OTHER THINGS FOR ENHANCING CREATIVITY)
Instructions / Guidelines :	<p><u>Project-1</u></p> <p>Students are requested to use charts and scrap book .</p> <ul style="list-style-type: none"> ➤ They need to make a newspaper and create Articles, report. ➤ It can have advertisements as well. ➤ Make it more vibrant & creative. ➤ The idea should be original and realistic.
Any Other Information: Date of submission: 04 th JULY 2022	<p><u>Project-2</u></p> <ul style="list-style-type: none"> ➤ Students can take file paper and write the Critical Appreciation for the same. ➤ Pictures can be pasted. ➤ Presentation with book cover and pictures of the characters will be icing on the cake.

PHYSICS

A decorative flourish consisting of several elegant, flowing lines that curve and swirl beneath the word 'PHYSICS'.

SUBJECT:	PHYSICS (042)
TIME TO BE SPENT (_Hours per day for __Days) :	AS PER THE INSTRUCTIONS GIVEN BY THE TEACHER
Work Specification:	Make an investigatory project file on one of the following topics-
Materials Required :	AS PER THE INSTRUCTIONS GIVEN BY THE TEACHER
Instructions / Guidelines :	<p>Suggested Investigatory Projects</p> <ol style="list-style-type: none"> 1.To study various factors on which the internal resistance/EMF of a cell depends. 2. To study the variations in currents flowing in a circuit containing and LDR because of a variation in a. the power of the incandescent lamp, used to ‘illuminate’ the LDR (keeping all the lamps at a fixed distance). 3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, an equil convex lens (made from a glass of known refractive index) and an adjustable object needle. 4. To investigate the relation between the ratio of (i) output and input voltage and (ii) number of turns in the secondary coil and primary coil of self-designed transformer. 5. To investigate the dependence of the angle of deviation on the angle of incidence using a hollow prism filled one by one, with different transparent fluids. 6. To estimate the charge induced on each one of the two identical Styrofoam(or pith) balls suspended in a vertical plane by making use of Coulomb’s law. 7. To study the factor on which the self-inductance of a coil depends by observing the effect of this coil, when put in series with a register/(bulb) in a circuit fed up by an A.C. source of adjustable frequency. 8. To study the earth’s magnetic field using a compass needle-bar magnet by plotting magnetic field lines and tangent galvanometer.
Any Other Information: Date of submission: AS PER THE INSTRUCTIONS GIVEN BY THE TEACHER	

CHEMISTRY



SUBJECT:	CHEMISTRY (043)
TIME TO BE SPENT (_Hours per day for 20 Days) :	(1 hour per day for 20 days)
Work Specification:	INVESTIGATORY PROJECT
Materials Required :	<ul style="list-style-type: none"> • Colour A4 Sheets/Photographs
Instructions / Guidelines :	<ul style="list-style-type: none"> ▪ Visible Spectra of Soda Pops ▪ Investigatory Project on Fertilizers ▪ Sterilization of Water by using Bleaching Powder ▪ Green Chemistry: Bio-Diesel and Bio-Petrol ▪ Rate of Evaporation of Different Liquids ▪ Effect of Potassium Bisulphite as a Food Preservative ▪ Lemon Ices ▪ Red Cabbage pH paper ▪ DNAS Secret Code ▪ Amorphous Solids ▪ Nanoparticle-Stained Glass ▪ Sweet Self-Assembly ▪ Photolithography ▪ Chemical Analysis of Authentic and Artificial Red Coral ▪ Catalytic Decomposition ▪ Boiling Hot ▪ Biodiesel ▪ An Ionic Inquiry Yields Saline Solutions ▪ Analysis of Water for Mercury using Light ▪ Which Grease Is Good for You? ▪ What Would You Like to Drink? Well Water ▪ What Voltage Is Needed for Steel to be Protected

Instructions / Guidelines :

- **Use of Exothermic Reaction**
- **The Formation of Frosty Diamond Crystals**
- **The Effect of Curcumin on Metallons**
- **Synthesis of Bismuth Telluride Nanowires**
- **Synthesis and Decomposition of Aspirin**
- **Synthesis and Characterization of a Self-Healing Polyme**
- **Analysis Of Vegetables And Fruit Juices**
- **Comparing Lactose Percentage between Whole Milk ar**
- **Comparison of the Citric Acid Concentration**
- **Content of Cold Drinks Available in the Market**
- **Determination Of Caffeine In Tea Samples**
- **Determination of Contents of Tooth Powder**
- **Electrical Cleavage of Mineral Ore**
- **Effects of Heat on Vitamin C in Tomatoes**
- **Effects of Voltage and Concentration**
- **Effect of Temperature on the Decay of Ascorbic Acid**
- **Destruction of Natural Pigments by the Interaction of UV**
- **Correlation Between Conductivity and Corrosion**
- **To Analyze a Sample of Brass Qualitatively**
- **To Compare The Rate Of Fermentation**
- **To Prepare a Smoke Bomb**
- **To Compare The Rate Of Evaporisation Of Water**
- **To Check The Ions Present In The Toothpaste**
- **To Study the Digestion of Starch by Salivary Amylase**
- **To Study the Effect of Metal Coupling on the Rate of Co**
- **To Study the Presence of Insecticides and Pesticides in**
- **To Study the Presence of Oxalate Ion In Guava Fruit**
- **Variation of Conductance with Temperature in Electroly**
- **Water Concentration and Texture**
- **Acidity In Tea**
- **Aldol Condensation**

Instructions / Guidelines :

- **Analysis Of Honey**
- **Mohr's salt**
- **Acid vs. Teeth**
- **Why Are the Apples Brown**
- **Percentage Purity Of Iron Wire**
- **Pesticides in Fruits and Vegetables**
- **Preparation Of Cuprammonium Rayon Threads**
- **Preparation of Ink**
- **Preparation Of Soyabean Milk**
- **Preparation of Toilet Soaps**
- **Removal of Alcohol from the Body through Esterification**
- **Study of Constituents of an Alloy**
- **Study of Content of Ascorbic Acid in Citrus Fruits**
- **Study of Diffusion of Solids in Liquids**
- **To Analyze a Sample of Brass Qualitatively**
- **Slicing Ice**
- **Nano-Gold For Cancer Therapy**
- **Invisible Sunblock**
- **Microencapsulation**
- **Using Zeolites as a Fertilizer**
- **What Keeps The Baby Dry**
- **Popcorn Towers**
- **Vitamin C in Fruit Juices**
- **Electrolyte Turns On the Solar Cell**
- **Optimal Temperature for the Decomposition**
- **Measurement of Diffusion Coefficient in Liquids**
- **Luminescent Silole Nanoparticles for Chromium (VI) Det**
- **Determine the Quantity of Casein in Milk**
- **Dyeing of Wool, Silk and Cotton in Malachite Green**

Instructions / Guidelines:

Instructions for making project:

- **Rate of Fermentation of Wheat Flour**
- **To Determine Ignition Property of Potassium Nitrate**
- **Setting Of Mixture of Cement with Sand, Time and Fly A**
- **To Prepare Pigments And Poster Paints**
- **Surface Chemistry Colloidal Solutions**
- **Formation Of Biodiesel**
- **Chocolate Analysis**
- **Electrochemical Cell**
- **Chemistry in Black and White Photography**
- **The Determination of the Amount of Phosphate in a**
- **The Synthesis of Aspirin**
- **The Neutralizing Ability of Antacid Tablets**

- ✓ **It should contain atleast 20 pages.**
- ✓ **The first two pages should be left empty, and it will be provided to you by your teachers.**
- ✓ **There will be a common format for acknowledgement and first page.**

Any Other Information:

Date of submission: 15th JULY 2022

Biology



SUBJECT:	BIOLOGY (301)
TIME TO BE SPENT (_Hours per day for 15 Days) :	2 hour per day for 15 days)
Work Specification:	INVESTIGATORY PROJECT
Materials Required :	Color A4 Sheets, Colored pictures, Case Study pictures
Instructions / Guidelines :	<ul style="list-style-type: none">• Topic must have content, Introduction, summary, case study and bibliography• Please paste relevant pictures related to topic of your project.• Please try to add new information related to your topic.• Please use left side for pasting picture and right side for text.• Cover page design of project file for all students must be same. (cover page will be provided via whatsapp)• Acknowledgement and certificate would be also similar that teacher will send in your class WhatsApp group.

Any Other Information:

Biology Investigatory Projects on Genetics and Evolution

Below is the list of Biology Investigatory Project Topics on Genetics and Evolution:

- 1. To Study the DNA the mysterious molecule**
- 2. To Study the Chromosomes and DNA Packaging**
- 3. To Study the Structure of the RNA and Its Functions**
- 4. To Study the Genetic Mutation: Types and its Causes**
- 5. To Study the Isolation of DNA from Animal Cell**
- 6. Study of the Developments in the Rice Genome Research**
- 7. To Study the Haemophilia: Types, Symptoms, and Treatment**
- 8. To Study the Adaptive Radiation and Ecological Opportunity**
- 9. To Study the Adaptive radiation in the aquatic vertebrates**
- 10. To Study DNA Fingerprinting: Principles, Methods, and Applications**

Biology Investigatory Projects on Human Welfare

Below is the list of Biology Investigatory Project Topics on Human Welfare:

1. To Study the Classification of the Drugs
2. To Study and determined the pH Tolerance of Microbes
3. To Study and Investigate Prevention Methods of Different types of Viral Human Diseases

Biology Investigatory Projects on Reproduction

Below is the list of Biology Investigatory Project Topics on Reproduction:

1. To Study the Growing Yeast: Sugar Fermentation
2. To Study on the Infertility and its Causes and Treatment
3. To Study the Development of the Human Embryogenesis

Biology Investigatory Projects on Biotechnology

Below is the list of Biology Investigatory Project Topics on Biotechnology:

- 1. To Study the Various new Biotechnological Researches**
- 2. To Study the Pharmacogenomics of Anti-Cancer Drugs**
- 3. To Study the Transgenic Animals: Production and Applications**
- 4. To Study the Nanotechnology Applications to the DNA Genotyping**
- 5. To Study the Human Reproductive Cloning and Biotechnology**
- 6. To Investigate the Nanotechnology Methods for DNA Isolation**
- 7. To Identify and Classify the Gene Shape Plant Response to salinity and drought**
- 8. Producing the Ethanol by using the molasses and its effluent Treatment**
- 9. To Study Biotechnology and its applications: Biology Investigatory Project for Class 12**
- 10. To Investigate methods to Production of the Human Insulin by using the Genetic Engineering**

Please Note

Date of submission: 04th JULY 2022

Mathematics

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SUBJECT:	MATHEMATICS (041)
TIME TO BE SPENT (_Hours per day for 15 Days) :	(1 HOUR PER DAY FOR 15 DAYS)
Work Specification:	Activities/Presentation Attempt any 6 activities Reference: Math’s Lab Manual Class XII
Materials Required :	• Colour A4 Sheets/ Graphs
Instructions / Guidelines :	<ol style="list-style-type: none"> 1. Verify given relation is symmetric but neither reflexive nor transitive 2. Demonstrate a function which is one-one but not onto. 3. To explore the principal value of $\text{Sin}^{-1} x$ using unit circle. 4. To draw the graph of $\text{Sin}^{-1}x$, using the graph of $\sin^{-1}x$ and demonstrate the concept of mirror reflection (about) the line $y=x$ 5. To verify that for a function f to be continuous at given point x_0 $\Delta_y = f(x_0 + \Delta_x) - f(x_0)$ is arbitrarily small provided Δx is sufficiently small. 6. To find analytically the limit of a function $f(x)$ at $x = c$ and also to check the continuity of the function at that point 7. To find the concepts of decreasing & increasing function. 8. To understand the concepts of absolute maximum & minimum values of a function in a given closed interval through its graph. 9. To verify the angle in a semi circle is a right-angle using vector Method 10. To measure the shortest distance between two points in space & then to verify the distance using distance formula. 11. To explain the computation of conditional probability of a given event A, when event B has already occurred through an example of throwing a pair of dice.
Any Other Information: Date of submission: 04 th JULY 2022	

COMPUTER SCIENCE



SUBJECT:	COMPUTERS SCIENCE (083)
TIME TO BE SPENT (_HOURS PER DAY FOR DAYS):	(1 HOUR PER DAY FOR 10 DAYS)
Work Specification:	PPT PRESENTATION ON PROJECT (PYTHON WITH SQL)
Materials Required :	MICROSOFT OFFICE, WORKING INTERNET CONNECTION, PYTHON S/W, SQL S/W
Instructions / Guidelines :	<ul style="list-style-type: none">▪ PROJECTS WITH ONLY PYTHON CONNECTIVITY WITH SQL WILL BE CONSIDERED.▪ CHOOSE THE PROJECT TOPICS WISELY. CONSIDER THE LATEST TRENDS/ TECHNOLOGIES.▪ A PROJECT GROUP SHOULD NOT BE MORE THAN 3 STUDENTS.▪ EACH STUDENT WILL BE PREPARING FOR THE PRESENTATION INDIVIDUALLY.▪ DOCUMENTATION PART OF PROJECT ALONG WITH THE PPT WILL BE PREPARED BY THE STUDENTS.▪ <u>NO TWO GROUPS SHOULD HAVE SAME PROJECT TOPIC.</u>▪ AT THE DAY OF PRESENTATION STUDENTS WILL BE RESPONSIBLE FOR SUBMITTING AND CONDUCTING PRESENTATION AT SCHOOL.▪ STUDENTS SHOULD HAVE THE DETAILED KNOWLEDGE OF THEIR PROJECT FOR THE QUERIES AFTER THE PRESENTATION.
Any Other Information: Date of submission: 04 th JULY 2022	

PHYSICAL
EDUCATION

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SUBJECT:	PHYSICAL EDUCATION (083)
TIME TO BE SPENT (HOURS PER DAY FOR DAYS):	(1 HOUR PER DAY FOR 10 DAYS)
Work Specification:	PROJECT WORK
Materials Required :	Colour A4 and physical Education lab manual Sheets/photographs
Instructions / Guidelines :	The File will include Total 03 Practicals and 01 Project: <ul style="list-style-type: none">▪ Practical-1: Fitness tests administration.▪ Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.▪ Practical-3: Anyone one IOA recognized Sport/Game of choice. Labelled diagram of Field & Equipment. Also mention its Rules, Terminologies & Skills.▪ Project on international yoga day
Any Other Information: Date of submission: 04 th JULY 2022	

History



SUBJECT:	HISTORY (027)
TIME TO BE SPENT	
(_ HOURS PER DAY FOR 30 DAYS):	(1 Month)
Work Specification:	Project Work/Presentation/Dance Drama/Panel discussion
Materials Required :	Pastel Sheets/Photographs/Models
Instructions / Guidelines :	<p>SUGGESTIVE TOPICS</p> <ul style="list-style-type: none"> ▪ Town Planning and Artifacts of the Harappan Civilization. (Group activity): In the form of a exhibition, the students could create ‘An Harappan Market’ stalls could be set up and the artefacts that the students collected/studied could be displayed. Students should dress up like the Harappan Shop keepers, Merchants, Traders, Musicians, Peasants and town dwellers. A barter system could be shown. ▪ “Mahabharata”- The Great Epic of India. (Group Activity) <ol style="list-style-type: none"> a. In the form of theatrical play or on any other dance art form. b. Panel discussion by students also be presented. ▪ Understanding the Bhakti Sufi movement in India. (Group Activity) <ol style="list-style-type: none"> a. Project Report b. Group discussion (Panel) ▪ The Revolt of 1857- Causes: Planning & Coordination, Leadership, Vision of Unity. <ol style="list-style-type: none"> a. (Individual activity) (Project Report)

Instructions / Guidelines :

- **Buddha Charita (Group Activity)**
 - a. In the form of Dance Drama
- **An Architectural Culture of the Vijayanagar Empire (Group Activity)**
 - a. Project Report
 - b. Power point Presentation
 - c. Model Presentation.
- **An Insight into the Indian Constitution (Group/Individual)**
 - a. Panel Discussion
- **Mahatma Gandhi and his ideas, Movements (Individual) Project Report.**

Any Other Information:
Date of submission: 10th JULY 2022

POLITICAL SCIENCE



SUBJECT:	POLITICAL SCIENCE (028)
TIME TO BE SPENT (_HOURS PER DAY FOR 30 DAYS):	(1 Month)
Work Specification:	Project Work/Presentation/Dance Drama/Panel discussion
Materials Required :	Pastel Sheets/Photographs/Power Point Presentation
Instructions / Guidelines :	<p>SUGGESTIVE TOPICS</p> <ul style="list-style-type: none"> ▪ Globalization (Group activity): <ol style="list-style-type: none"> a. In the form of a Power Point presentation and can present the various sub-topic. b. Project Report is mandatory. ▪ “VASUDHAIVA KUTUMBAKAM” INDIA-UNSC Relations (Group Activity) <ol style="list-style-type: none"> a. Power Point presentation with explanation by each member. b. Panel discussion by students also be presented. c. Project Report by the Group. ▪ DRAGAON AT THE DOORSTEP- Highlight the relation between China and India. <ol style="list-style-type: none"> a. Project Report b. Group discussion (Panel) c. Personal presentation with Power Point.
Any Other Information: Date of submission: 04 th JULY 2022	

Instructions / Guidelines :

- **CHALLENGES OF NATION BUILDING.**
 - a. (Individual activity) (Project Report)
- **UNITED NATIONS AND ITS ORGANIZATIONS**
INDIVIDUAL/GROUP
 - a. In the form of Panel Discussion
 - b. Project Report important
- **SOUTH ASIA AND THE CONTEMPORARY WORLD**
 - a. Individual
 - b. India and its neighbors
 - c. India- Pak relation
 - d. Civil War in Sri Lanka
 - e. SAARC
 - f. Birth of Bangladesh
 - Birth of Bangladesh
 - a. Project Report
 - b. Power point Presentation
- **ENVIORNMENT AND NATURAL RESOURCES**
(Individual) Project Report.
 - a. Environment Movement
 - b. Global warming
 - c. Climatic changes
 - d. India's efforts towards Environmental Conservation.
- **INDIA'S NUCLEAR PROGRAMME**
Individual
- **PARTIES AND PARTY SYSTEM IN INDIA**
Individual
- **DEMOCRATIC RESURGENCE**
(Individual)

Any Other Information:

Date of submission: 10th JULY 2022

ECONOMICS



SUBJECT:	ECONOMICS (030)
TIME TO BE SPENT (_ HOURS PER DAY FOR _ DAYS):	1 hour per day for 15 days
Work Specification:	Project Report/PPT/Videos
Materials Required :	• Colored A4 One-side Lined Sheets/Photographs/Graphs
Instructions / Guidelines :	<p>Students can choose one topic-</p> <ol style="list-style-type: none"> 1) PPTs/Slide Show on Topic ‘Money and Banking’. 2) Project on ‘New Economic Policy’. 3) PPTs, Slide Show/ Project on National Income & its related aggregates. 4) Video-making on ‘Aggregate Demand’. 5) Project Report on ‘Government Budget’. 6) Designing through photoshop and other applications on ‘Rural Development’ and ‘Unemployment in India’, 7) Designing through photoshop and other applications on ‘Agriculture on India’. 8) Project on ‘Banking Sector Reforms’. 9) Project on ‘Tax Reforms in India’. 10) Project on ‘Digital India Movement in India’. 11) Project on ‘Import Substitution vs Export Promotion’. 12) Project on ‘Impact of Macroeconomic Variables on Values of Currencies’. 13) Project on ‘Demonetization in India’. 14) Project on ‘Price Discrimination’. 15) Project on ‘Cashless Economy’. 16) Project on ‘The Central Bank and its Functions’. 17) Project on ‘Foreign Exchange Market’.
Any Other Information: Date of submission: 11 th JULY 2022	

ACCOUNTANCY

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SUBJECT:	ACCOUNTANCY (055)
TIME TO BE SPENT (_ HOURS PER DAY FOR _ DAYS):	(1 HOUR PER DAY FOR 10 DAYS)
Work Specification:	PROJECT FILE
Materials Required :	A4 SIZE DESIGNER SHEETS/PICTURES/COLORFUL PENS
Instructions / Guidelines :	COMPREHENSIVE PROJECT-1 1. Name of the Project : A study of Partnership 2. Objectives of the Project (i) To know whether business in partnership is a success or a failure (ii) To know whether the Bank will give Loan for the partners for business. 3. Period of Study : One Year ending 31st March 2021 4. Analytical tools used : Necessary Accounting Ratios 5. Source Material : Project statement
Any Other Information: Date of submission: 04th JULY 2022 Project File should be neatly handwritten and presentable with page numbers. Each step of the solution needs to be highlighted. Conclusions drawn should be placed in boxes at the end.	

BUSINESS STUDIES



SUBJECT:	BUSINESS STUDIES (054)
TIME TO BE SPENT (_ HOURS PER DAY FOR _ DAYS):	(1 HOUR PER DAY FOR 10 DAYS)
Work Specification:	PROJECT FILE
Materials Required :	A4 SIZE DESIGNER SHEETS/PICTURES/COLORFUL PENS
Instructions / Guidelines :	Students are required to make only ONE project. *(Topic will be allotted roll no. wise by the subject teacher in the class) Project One: Elements of Business Environment Project Two: Principles of Management Project Three: Stock Exchange Project Four: Marketing
Any Other Information: Date of submission: 04th JULY 2022 Project File should be neatly handwritten and presentable with page numbers. Total Length of the project will be of 25 to 30 pages.	