



Mukand Lal Public School

Sarojni Colony, Yamunanagar

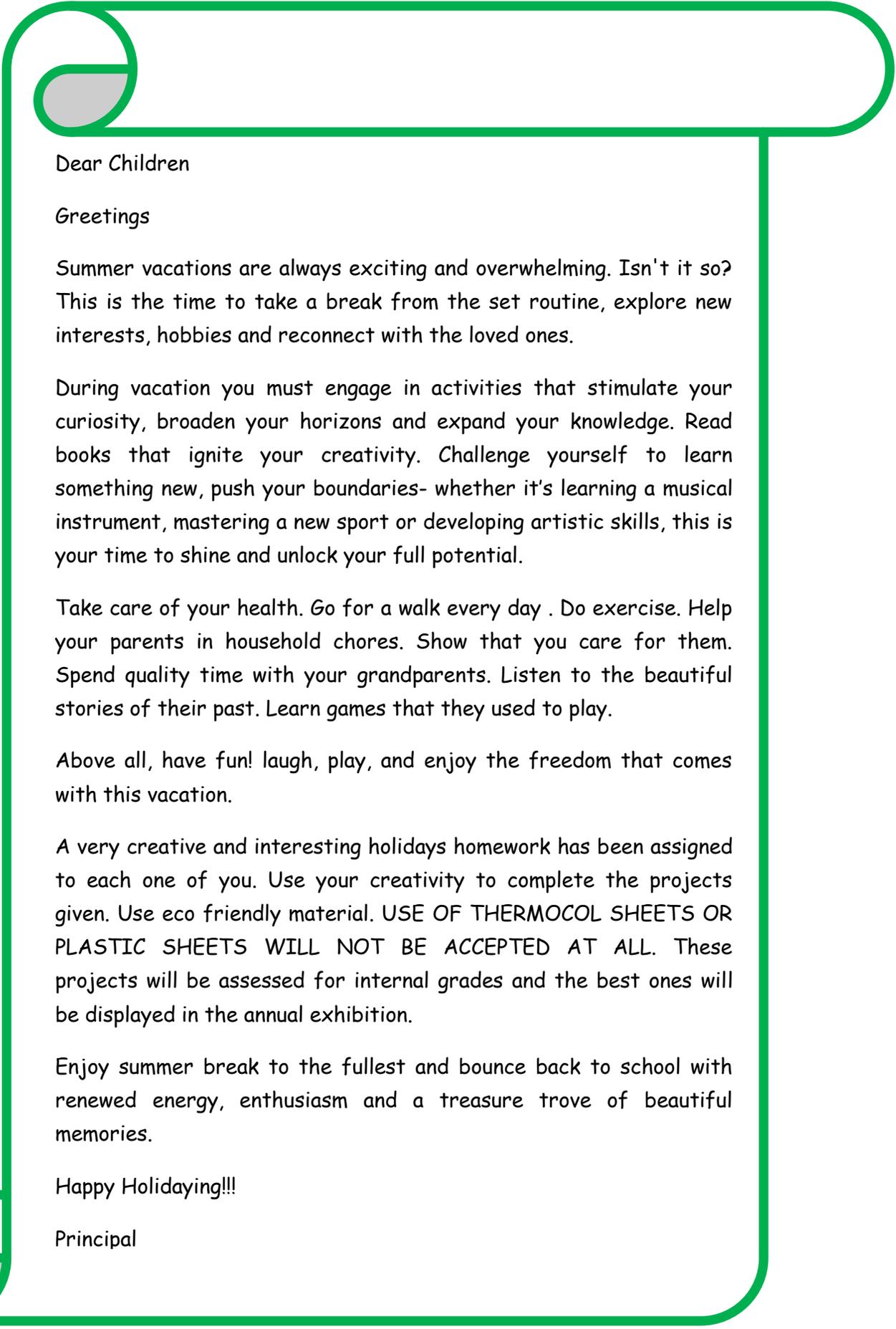
AFFILIATION NO:- 530294 SCHOOL CODE :- 40279

Website : www.mlpschool.edu.in Contact No:- 01732-250092, 257513

Holidays Homework

Class - XII (2025-26)





Dear Children

Greetings

Summer vacations are always exciting and overwhelming. Isn't it so? This is the time to take a break from the set routine, explore new interests, hobbies and reconnect with the loved ones.

During vacation you must engage in activities that stimulate your curiosity, broaden your horizons and expand your knowledge. Read books that ignite your creativity. Challenge yourself to learn something new, push your boundaries- whether it's learning a musical instrument, mastering a new sport or developing artistic skills, this is your time to shine and unlock your full potential.

Take care of your health. Go for a walk every day . Do exercise. Help your parents in household chores. Show that you care for them. Spend quality time with your grandparents. Listen to the beautiful stories of their past. Learn games that they used to play.

Above all, have fun! laugh, play, and enjoy the freedom that comes with this vacation.

A very creative and interesting holidays homework has been assigned to each one of you. Use your creativity to complete the projects given. Use eco friendly material. **USE OF THERMOCOL SHEETS OR PLASTIC SHEETS WILL NOT BE ACCEPTED AT ALL.** These projects will be assessed for internal grades and the best ones will be displayed in the annual exhibition.

Enjoy summer break to the fullest and bounce back to school with renewed energy, enthusiasm and a treasure trove of beautiful memories.

Happy Holidaying!!!

Principal



HOLIDAY HOMEWORK

ENGROSSING ENGLISH

- Roll no 1-5 Position Paper:- “Indonesia’s Role in Advancing Women’s Rights in Southeast Asia”
- Roll no 6- 10:- Poster or Infographic: Highlighting achievements, stats, and remaining challenges of Indonesia
- Roll no 11 -15:- News Brief: Create a mock news article on a new policy for women's safety or education of Indonesia
- Roll no 16 – 20:- Case study on Pros and cons of community surveillance to prevent extremism in Indonesia
- Roll no 21- 25:- Fact Sheet or Brochure: “Indonesia vs. Climate Change – Policies, Risks, and Innovations”
- Roll no 26 – 30:- Report and Poster: Visuals on deforestation, palm oil production, and marine conservation
- Roll no 30 -35:- Short Research paper “Indonesia's Forests: Balancing Growth and Green” Policy Proposal: Suggest steps for Indonesia to meet its climate targets
- Roll no 35 onwards :- Newsletter: Make a 2-page newsletter titled “The Diplomatic Dispatch – Indonesia’s Voice at the UN”.

Note :- *Revise vocabulary (already sent in class groups)

*Do worksheets related to invitations , notice writing and letter to Editor from BBC

*Solve literature questions from BBC and revise them.

PASSIONATE PHYSICS

TOPIC: FROM ATOMS TO ASTRO PHYSICS

Prepare a project report in 1000-1500 words on A4 sheet. Use colourful diagrams, images and cutouts related to the topic.

XII A: Cosmology and the Origins of the Universe

Roll no (1-10) : How does the Big Bang theory explain the current structure of the universe?

Roll no (11-20) : The role of dark matter in the formation of large-scale cosmic structures.

Roll no (21-30) : How do galaxy clusters help us understand the large-scale structure of the universe?

Roll no (31-40) : The significance of neutron star mergers in cosmological research.

Roll no (41 onwards) : The role of quantum fluctuations in the early universe.

XII B: Black Holes and Neutron Stars

Roll no (1-10): How do black holes form from massive stars?

Roll no (11-20): How do we detect and study black holes in binary systems?

Roll no (21-30): How do black holes influence the evolution of galaxies?

Roll no(31-40): How do black holes in the early universe differ from those observed today?

Roll no (41 onwards): How do magnetic fields affect the behavior of neutron stars?

XII C: Dark Energy

Roll no (1-10): What is dark matter?

How do scientists detect and study dark matter if it does not emit light?

Roll no (11-20): The role of dark energy in the accelerating expansion of the universe.

Roll no (21-30): What are the leading theories explaining the nature of dark matter?

Roll no (31-40): The role of dark matter in the early universe and its impact on cosmic inflation.

Roll no (41 onwards): How does the concept of dark energy fit into current cosmological models?

CHARISMATIC CHEMISTRY

TOPIC: REACTIONS THAT CHANGED THE WORLD

Prepare a project report in 1000-1500 words on A4 sheets. Use colourful diagrams, images and cutouts related to the topic. (Table of content: Introduction, objective, scope of study, hypothesis, research methodology, data analysis and interpretation, suggestions, bibliography)

XII A: Chemistry involved in explosions during war, Environmental chemistry and Chemistry in everyday life.

Roll no (1-10): Chemistry of nuclear reactions in atomic bomb explosions? What are the harmful radiations emitted and its radioactive decay? Preventive measures to reduce its effect.

Roll no (11-20): Carcinogenic chemicals around us: cancer causing chemicals used in our everyday life like in pesticides, chemical fertilizers, processed food: ready mixes & junk food, paints (heavy metals), cosmetics etc.

Roll no (21-30): The classification of medicinal drugs used for treatment of disease like cancer, AIDS etc.

Roll no (31-40): The chemistry of food adulterations and preservatives used in packed food.

XII B: Chemical reactions that change the history of world in chemical sciences.

Roll no (1-10): How does formation of urea in lab changed the complete background of organic chemistry?

Roll no (11-20): How the polymerisation of ethene forms polyethylene led to modernisation of life.

Roll no (21-30): Ozone destruction with discovery of mechanical refrigeration technology and chlorofluorocarbons (CFCs). Chemicals discovered used as refrigerants except CFCs.

Roll no (31-40): The combustion of highly inflammable Hydrogen gas with normal air produced water.

Roll no (41 onwards): Water with carbon dioxide forms carbonic acid, **carbon capture**: ocean acidification to decrease pH to support marine life

XII C: Nanoparticles: history, discovery, types, properties, applications and harmful impacts.

Roll no (1-10): Carbon based nanoparticles-Fullerenes: properties, applications and toxicities.

Roll no (11-20): Metal nanoparticles: properties, applications and toxicities.

Roll no (21-30): Ceramic nanoparticles: properties, applications and toxicities.

Roll no (31-40): Polymeric nanoparticles: properties, applications and toxicities.

Roll no (41 onwards): Semiconductor nanoparticles: properties, applications and toxicities.

BUBBLY BIOLOGY

Roll No. 1 to 4

CRISPR-Cas9 Gene Therapy

Write a research paper on how CRISPR-Cas9 is used to treat inherited blood disorders. Include its working, examples, and ethical issues.

Roll No. 5 to 8

Drought-Resistant Crops

Write a report how genetic engineering helps create drought-resistant crops. Explain methods, one example, and benefits.

Roll No. 9 to 12

Bioinformatics & Personalized Medicine

Write about how bioinformatics supports personalized treatments. Include one disease example and data analysis methods.

Roll No. 13 to 15

Bioremediation Using GM Microbes

Write a research paper how modified microbes clean pollutants. Include process, one example, and safety concerns. Cite reliable sources.

Roll No. 16 to 19

Bioprocess Optimization for Medicines

Make a presentation on how biotech improves medicine production using microbes. Include one technique and product example.

Roll No. 20 to 22

Advancement and challenges in gene therapy for genetic disorders.

Make a presentation on gene therapy. Comprehensive Review of Viral Vector Platforms, Targeted Delivery Systems, and Long-Term Efficacy.

Roll No. 26 to 28

Synthetic Biology in Microbes

Write on how microbes are redesigned to produce useful compounds. Give one example and explain the method.

Roll No. 29 to 30

Stem Cells in Regenerative Medicine

Make an investigatory project on how stem cells help repair or grow tissues/organs. Explain medical uses and related technique.

Roll No 31

Genetic Engineering in Agriculture

Explore how GM technology improves food crops. So include traits modified and impact on farming. Use real-world cases.

Roll No. 32

Future of Biotechnology

Write a paper on future trends in biotech (e.g., AI in genetics, lab-grown meat). Choose one trend and explore its impact. Support with 2–3 sources.

AIL Projects

1. Build a model to predict traits from your genes
2. Create an infographic about biotech careers
3. DNA Origami
4. Designing family trait tree
5. Genetic trait Portraits
6. DNA Fingerprinting
7. Create an evolution timeline collage with pictures/drawings of major life forms.
8. Genetics Journal: Heredity traits observation, pedigree chart, DIY DNA model
9. Ecology and Environment: Local biodiversity survey, DIY bird feeder or insect hotel
10. Evolutionary Insights: Evolution of a species with timeline or poster project
11. My Bio StartUp Idea – Biotech for a Better World (Genetic engineering, agriculture, pharmaceuticals, forensic science, bioinformatics, etc.)
Students identify a real-world issue (e.g., crop failure, rare disease, pollution) and brainstorm a biotech-based solution.
Create a poster or comic strip showing how their product/technology works.
12. Topic: In-situ and Ex-situ Conservation
Activity Title: “Nature’s Home vs. Rescue Shelter – A Conservation Poster
13. Journey of Life: Embryo to Baby
Depict stages of embryo by using clay and colourful materials.
14. Canvas of Cleanliness: Depicting the Journey from Sewage to Sustainability”
Draw a concept map or through model making show the stages of waste water treatment.

MINDFUL MATHEMATICS

CLASS XII B

Make a project of 1000-1500 words on A4 Sheet. Use colourful diagrams, images related to the topic.

Roll no. (1 - 8) : Explore how derivatives are used in real world scenarios like population growth.

Roll no. (9 -16) : Study the role of Probability in weather forecasting and analyze the accuracy of different forecasting models.

Roll no. (17-24) : Explore how Linear Programming can be used to solve optimization problem in industries like manufacturing or transportation.

Roll no. (25-32) : Explore how Calculus is used to analyze the projectile motion.

Roll no (33 onwards) : Investigate the Fibonacci sequence and its occurrence in nature.

Class XII C

Roll no (1-8) : Explore how Matrices are used in data security.

Roll no (9 -16) : Explore how Calculus can be used to optimize various scenarios, such as finding the maximum profit for a business or the minimum cost of the product.

Roll no (17-24) : Analyze how Linear Programming can be used to make decisions in everyday situations such as planning a diet or optimizing a commute.

Roll no. (25-32) Explore the appearance of golden ratio in nature art and architecture.

Roll no. (33 onwards) : Explore the role of Probability in games and simulation

AWESOME ACCOUNTANCY

- 1) Search any 3 partnership firms of your city and collect the following details along with the pictures:
 - a) Name of the firm.
 - b) Names and addresses of the partners.
 - c) Print out of the partnership deed.
 - d) Capital invested by the partners.
 - e) Nature of the business (manufacturing/trading)
 - f) Name of the product in which the firm is dealing.
 - g) Financial statements (attach print outs)

- 2) Search out names of any five companies listed on any stock exchange; monitor the prices of their shares for fifteen working days. Prepare a comparative report on your observations about change in their prices.

EXCITING ECONOMICS

1. Take a hypothetical numerical example and show the process of credit creation by the commercial banks.
2. Search out the recent rates announced by RBI such as Bank rate, Repo rate , Reverse repo rate , CRR, SLR, and explain their working for credit expansion and credit contraction in the form of mind maps.
3. Study the recent Government Budget announced by Finance Minister of India and note down its major highlights and its impact on Individuals, Businessman and agricultural sector.
5. Frame a hypothetical example showing triple identity in national income.
6. Search about Reserve Bank of India and prepare project on it along with information on Monetary Policy Committee.

BLISSFUL BUSINESS STUDIES

Do the following case studies:

- 1) Ratan enterprises decided to have meeting of the key employees of different departments in the organization. The main motive is to tell the employees to keep the target of 20% increase in the sales as the main objective when they work through out the year. The meeting is full of ideas about the employees and processes involved. Various plans are made to harness the potentials of employees and streamline the processes. However with the passage of the few days the external business environment checks the capability of the organization to adapt to the situations. At the end of the year the company successfully comes out with flying colors.
 - a) By quoting the lines, identify the various characteristics of management highlighted here.
 - 2) Design a chart depicting the
 - a) 'Effectiveness and Efficiency' as the outcome of management.
 - b) Coordination 'as the essence of management'
 - c) Fayol's Principles of Management.

3) Draft a case study which highlights the points of importance of Principles of management.
4) This year a meeting is organized by Ramesh Mittal, CEO of the company. In this meeting, Ramesh granted some funds for the benefits of the families of the employees. The employees on the other hand never resist any change or put excessive demands. The general environment in the company is very supportive to the employees. The employees turnover ratio is very low.

a) Which concept of the management is discussed here?

b) Which principle of management is followed here ?

5) Write a detailed note on Managerial Response to changes in business environment. Use example to support your explanation.

6) XYZ Company is manufacturing garments. The manager wants to increase the profits by purchasing new high speed machines or increasing the sale price or using waste material in manufacturing stuffed toys. He decided that using waste material to increase the profits is the best solution for him.

a) Identify the concept of management involved.

b) Mention the steps involved in above process by quoting the lines from the question.

c) To complete the process of concept identified in (a), what two next steps the manager has to take. Explain.

Projects/ Models

- **(Roll No. 1 -7)**

Prepare 10 articles from used polythene bags.

Prepare a working model on sustainable development goals.

- **(Roll no 8- 15)**

Prepare a working model on Financial statements.

- **(Roll no 16- 23)**

Prepare 10 eco friendly products from bamboo sticks.

Prepare a working model on Renewal energy sources

- **(Roll no 24 -31)**

Prepare 10 things from clay (jewellery).

Prepare a working model on solar water pump.

- **(Roll no 32 -35)**

Prepare 10 eco friendly products from cardboard.

Prepare a working model on solar drip irrigation model.

SASSY PSYCHOLOGY

Make models on any one topic

Roll no 1 to 7

1. The effects of anxiety and depression on the body
2. Cognitive model of emotional disorders
3. DBT model of emotions ; A guide to emotional regulation
4. Mood disorders

5. Emotions and influence of social media
6. Emotion regulation strategies
7. Cycle of anger
8. The PERMA model : a scientific theory of happiness

PROJECT

Make a book cover on the life and development of any one psychologist as mentioned in chapter 1 and 2 of your psychology book.

Use A3 size sheet to make the book cover. The book cover has to be handmade and should depict the theory/ recognition / work of the psychologist that has been chosen.

Inside the book cover the following information to be provided

- a. Life history
- b. Prestigious awards and recognitions
- c. Development of theory
- d. Relevance of theory in current scenario

ASSIGNMENT OF UNIT I (Variations in psychological attributes) And UNIT II (Self and personality)

1. “ Ravi is a 25 years old youth who possesses high motivation , lacks patience , feels short of time and is always pressured by work”.
 - a) Which type of personality do you think Ravi is possessing?
 - b) What are the other types of personality that may exist ?
 - c) Name the psychologists who have given these types of personality ?
2. Using Allport’s theory, Identify the various types of traits in the given situation. Explain them in detail. “Supriya is a very warm and friendly girl who is often known as the Florence Nightingale of the class. She is a very traditional girl who always prefers to wear Indian or ethnic clothes. She hates the western culture especially the trend of going to parties and discotheque.”
3. Raj and Raghu are exceptionally intelligent children of highly successful doctor parents. While Raj is their biological child, Raghu is an adopted one . How can you explain the similarities in their intelligence with their doctor parents ? What type of test would you suggest to assess their intelligence ?
4. As a student of class XII , you wish to score very high marks in your board examination , You start planning for the same by attending classes regularly , taking notes , setting study targets etc. Identify and explain the theory of intelligence which includes planning as an essential feature.
5. “According to Freud ,structural elements of personality reside in the unconscious as forces and can be inferred from the way people behave” Justify
6. Explain the competencies of Indian notion of intelligence.
7. Identify and define the Defense mechanisms given below:
 - a) “A student having a strong desire to cheat in the exam, is not able to do so because of the strong revolt by the conscious within. So he suspects that the other classmates might be cheating.

b) A boy who was reared to believe that sex is evil and dirty may become anxious every time sexual feelings surge to the surface. So in order to defend against the anxiety, he joined the groups against sex in media.

c) A tense father who had troubles in office gave a harsh beating.

8. Elucidate any two misuse of intelligence tests in daily life.

9. Kirti is of average intelligence but is high on ability to appraise, express and regulate her emotions. Identify the intelligence that she exhibits and why it is receiving so much attention these days. ?

PEPPY POLITICAL SCIENCE

1. Make a file of detailed analysis on "OPERATION SINDOOR" with respect to Indo-Pak relations.

2. Prepare a political map of India, labelling India's states and capitals.

3. Learn and revise all the completed chapters.

