



# Rukmani Birla Modern High School

Session 2024-25

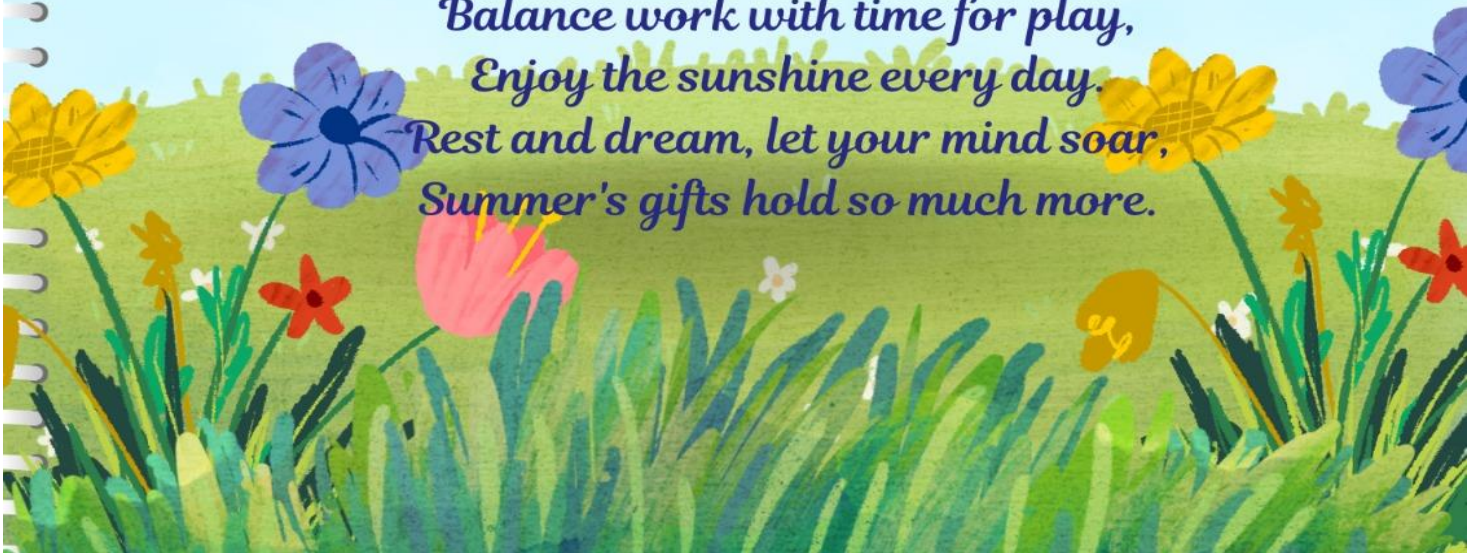
## SUMMER ASSIGNMENT

*Summer days, so warm and bright,  
Filled with laughter, pure delight.  
Every day a chance to see,  
The world in all its mystery.*

*Explore the world, both near and far,  
Find out just how brave you are.  
Let curiosity be your guide,  
In every step, take pride.*

*When you return to books and class,  
You'll be refreshed and strong at last.  
For summer's magic, soft and slow,  
Is the seed where knowledge grows.*

*Balance work with time for play,  
Enjoy the sunshine every day.  
Rest and dream, let your mind soar,  
Summer's gifts hold so much more.*





**RUKMANI BIRLA MODERN HIGH SCHOOL, JAIPUR**  
**Session 2024-25**  
**SUMMER ASSIGNMENT**  
**CLASS XI**

<b>Subject</b>	<b>Holiday Assignment</b>
English	<p>What does a global spectacle like Paris Olympics 2024 mean, post pandemic in the midst of so many conflicts and fractures across the planet? To what extent will Paris Olympic mirror the triumphs and challenges of the present day.</p> <p>Conduct a research on the cultural significance of hosting the Olympics and create a PPT (minimum 10 slides) on how the 2024 Olympics might impact the host city.</p> <p><b>INCLUDE THE FOLLOWING:</b></p> <p>Historical Perspective Promotion of Arts and Culture Boost in Tourism</p>
Physics	<p><u>Investigatory Project</u> :As per CBSE syllabus, the students have to prepare an investigatory project .The project must be based on some concept of physics of standard class XI. The students will have to submit a report on the project comprising scientific investigations involving laboratory testing and collecting information from other sources.</p> <p><u>Guidelines to be followed :</u></p> <p>(a) The Students will get the topic of investigation from the concerned subject teacher.</p> <p>(b) Brief report (Investigation file)</p> <p>Mention following details:</p> <p>Cover Page Index Certificate Acknowledgement Content:</p> <ol style="list-style-type: none"><li>1. Aim (name of investigatory project)</li><li>2. Apparatus and material used</li><li>3. Theory (concept, diagram etc.)</li><li>4. Procedure</li><li>5. Experiments and Observations</li><li>6. Result/Conclusion</li></ol>

	<p>7. Application of project in daily life</p> <p>8. Bibliography</p> <p><b>Topics of investigation:</b></p> <ol style="list-style-type: none"> <li>1. To find out how accurate parallax is when determining the distance of stars from the earth.</li> <li>2. To determine the effect of friction of different surfaces on the distance travelled by a vehicle powered by a balloon.</li> <li>3. To find out whether the length, amplitude, or weight of a pendulum affected its period of motion.</li> <li>4. To investigate the effect of angle of launch on range of projectile.</li> <li>5. To study Capillary rise (find height for different liquids).</li> <li>6. Rolling of body in inclined plane i.e. to find the time taken to reach bottom for sphere, cylinder, disc, ring, hollow sphere, hollow cylinder (for any three bodies of same mass)</li> <li>7. To investigate the Bernoulli's theorem with simple experiments.</li> <li>8. To study phenomenon of resonance using an open pipe.</li> <li>9. To determine if sound will travel faster in different salinities of water.</li> <li>10. To determine the effects of the temperature of the universe on Black Holes as the universe ages.</li> </ol>
Chemistry	<p>Investigatory Project- As per C.B.S.E. Guidelines: Scientific investigations involving research and collecting information from other sources.</p> <p>Project must cover the following:</p> <ul style="list-style-type: none"> <li>• Cover Page</li> <li>• Index</li> <li>• Certificate</li> <li>• Acknowledgement</li> <li>• Objective of Project</li> <li>• Content</li> <li>• Result</li> <li>• Bibliography</li> </ul> <p><b>Few suggested projects:</b></p> <ol style="list-style-type: none"> <li>1. Investigation of foaming capacity of different washing soaps and the effect of addition of sodium carbonate on it.</li> <li>2. To Study methods of purification of water.</li> <li>3. To study the acidity of different samples of tea leaves</li> <li>4. Effect of acids and bases on the tensile strength of fibers'.</li> <li>5. Checking the bacterial contamination in drinking water by testing sulphide ions</li> <li>6. Determination of the rate of evaporation of different liquids.</li> <li>7. Study of acidity of various fruits and vegetable juices.</li> <li>8. Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any).</li> <li>9. Preparation of crude paints.</li> </ol>

	10. Study of the effect of metal coupling on the rusting of Iron.
Mathematics	<p>Activity 1- To find the number of subsets of a given set and verify that if a set has n number of elements, then the total number of subsets is <math>2^n</math>.</p> <p>Activity 2 -To verify that for two sets A and B, <math>n(A \times B) = p \times q</math> and the total number of relations from A to B is <math>2^{pq}</math>, where <math>n(A) = p</math> and <math>n(B) = q</math>.</p> <p>Activity 3- To represent set theoretic operations using venn diagrams.</p> <p>Activity 4- To verify distributive law for the three given non-empty sets A, B and C that is</p> $A \cup (B \cap C) = (A \cup B) \cap (A \cup C).$
Biology	<p><b><u>INVESTIGATORY PROJECT</u></b></p> <p>1. As per CBSE guidelines, the students have to prepare an investigatory project on a topic. The project should be submitted in the form of PPT comprising the scientific investigations and the information collected from appropriate sources. Along with the PPT you have to make a chart or a model related to your topic.</p> <p>2. <b>Presentation of the project</b></p> <ul style="list-style-type: none"> <li>• Index</li> <li>• Certificate</li> <li>• Acknowledgement</li> <li>• Objective of Project</li> <li>• Introduction</li> <li>• Content</li> <li>• Discussion and Conclusion</li> <li>• Bibliography</li> </ul> <p>3. <b>Few suggested topics:</b></p> <ul style="list-style-type: none"> <li>• Sporulation in Fungi</li> <li>• Effect of Environmental condition on the rate of transpiration</li> <li>• Economically important insects</li> <li>• Lung capacity and volume in human.</li> <li>• Anthropogenic action deteriorate environment.</li> <li>• Effect of environmental factors on growth of plants</li> <li>• Deficiency diseases in plants</li> <li>• Vital capacity in man</li> <li>• Biomimicry</li> <li>• Hydroponics based vertical farming</li> <li>• Malnutrition in India</li> <li>• Effect of oil spills in oceans</li> <li>• Angina pectoris</li> <li>• Effect of the different wavelengths of light on the growth of plants</li> <li>• Pollinating agents</li> <li>• Comparative study of flowers of different families</li> <li>• Human skeleton and joints</li> <li>• Sliding filament theory of muscle movement.</li> <li>• ABO Blood grouping</li> </ul> <p><b>Guidelines for PPT:</b></p> <ul style="list-style-type: none"> <li>• Choose the Images and Videos wisely.</li> </ul>

	<ul style="list-style-type: none"> <li>• Choose a smart color scheme.</li> <li>• Use Animations in moderation for maximum impact.</li> <li>• Keep your presentations under 15 minutes with at least 10-12 slides of the content.</li> </ul>
Geography	<ul style="list-style-type: none"> <li>• Complete first two chapters in your practical file. Chapter 1- Introduction to Maps Chapter 2 – Map Scale</li> <li>• Make notes of the chapters taught till date.</li> <li>• Read the newspaper on daily basis.</li> <li>• Collect information of any three geographical events occurring on the globe.</li> <li>• Paste the information and write a gist on each in about 250-500 words.</li> </ul>
History	<p><b>PROJECTWORK</b></p> <p><b>Guidelines for History Project Work</b>  <b>One Project</b> to be done throughout the session, as per the existing scheme.  <b>Steps involved in the conduct of the project:</b>  Students may work upon the following lines:</p> <ul style="list-style-type: none"> <li>• Choose a Title/Topic</li> <li>• Need of the Study, Objective of the Study</li> <li>• Hypothesis</li> <li>• Content-Timeline, Maps, Mindmaps, Pictures, etc.</li> <li>• (Organization of Material/Data Present Material/Data)</li> <li>• Analyzing the Material/Data for Conclusion</li> <li>• Draw the Relevant Conclusion</li> <li>• Bibliography</li> </ul> <p><b>2. Expected Checklist for the Project Work:</b></p> <ul style="list-style-type: none"> <li>• Introduction of topic/title</li> <li>• Identifying the causes, events ,consequences and/or remedies</li> <li>• Various stakeholders and effect on each of them</li> <li>• Advantages and disadvantages of situations or issues identified</li> <li>• Short-term and long-term implications of strategies suggested during research</li> <li>• Validity, reliability, appropriateness, and relevance of data used for research work and for presentation in the project file</li> <li>• Presentation and writing that is succinct and coherent in project file</li> <li>• Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.</li> </ul> <p><b>FEW SUGGESTIVE TOPICS FOR PROJECTS</b></p> <ol style="list-style-type: none"> <li>1. Facets of the Industrialization in sixteenth-eighteenth centuries.</li> <li>2. Crusades: causes; rationale; events; outcomes; Holy Alliance</li> <li>3. Ancient History indepth: Mesopotamia</li> <li>4. Greek Philosophy and City States</li> <li>5. Contributions of Roman Civilization</li> <li>6. The spirit of Renaissance :Manifestation in art; Literature; Sculpture;</li> </ol>

	<p>Influence on Trading Community; Social Fabric; Philosophy; Political Values; Rational Thinking; Existentialism</p> <p>7. Aspects of Development-South American States/Central American States</p> <p>8. Different schools of thoughts-Realism: Humanism: Romanticism</p> <p>9. Piecing together the past of Genghis Khan</p> <p>10. Myriad Realms of Slavery in ancient, medieval, and modern world</p> <p>11. History of Aborigines–America/Australia</p> <p>12. Facets of Modernization–China/Japan/Korea</p> <p>Students to pick any one topic after a thorough discussion with the subject teacher. In the research project, students can go beyond the textbook and explore the world of knowledge. They can conceptualize under the embedded themes. Forms of rubrics are a significant aspect and to be discussed in the classroom itself for clear understanding of concept and for assessment.</p>
Business Studies	<p><b><u>“Visit to a Mall”</u></b></p> <p>The students will visit to any mall in any city with their parents and make a project report or observation report with photograph (consisting 15 -20 pages) which must include the following:</p> <ol style="list-style-type: none"> <li>1. Number of floors, shops occupied and unoccupied.</li> <li>2. Nature of shops, their ownership status</li> <li>3. Nature of goods dealt in: local brands, international brands,</li> <li>4. Service business shops- Spas, gym, saloons etc.</li> <li>5. Rented spaces, owned spaces,</li> <li>6. Different types of promotional schemes.</li> <li>7. Most visited shops.</li> <li>8. Special attractions of the Mall- Food court, Gaming zone or Cinema etc.</li> <li>9. Innovative facilities.</li> <li>10. Parking facilities.</li> <li>11. Any other relevant information about the visit.</li> </ol> <p><b>IMPORTANT INSTRUCTIONS:</b></p> <p><b>The project report will be developed in the following sequence-</b></p> <ul style="list-style-type: none"> <li>• <b>Cover page should contain – Title of the project, Student Information, School Name, Subject, Submitted To, Submitted by and Academic year.</b></li> <li>• <b>Acknowledgement</b></li> <li>• <b>Certificate</b></li> <li>• <b>Index</b></li> <li>• <b>Content</b></li> <li>• <b>Bibliography</b></li> </ul>
Sociology	<p><b>PROJECTWORK</b></p> <p>As per the CBSE guidelines each student has to prepare a research project. The project must involve actual first hand research done by the students in close consultation with the teacher. Students can take any topic of their choice emphasizing the importance/effects/role of society.</p> <p><b>PREPARATION AND SUBMISSION OF PROJECT REPORT</b></p>

	<p>Each report must fulfill the following requirements:</p> <ol style="list-style-type: none"> <li>1. The body of the Project Report will be of approximately 15-20 A4/A3 Pages excluding additional appendices, questionnaires etc.</li> <li>2. The project report will be written in the student's own hand; though they may include other illustrative material that is not hand-written</li> <li>3. The project report will contain the following matter: <ol style="list-style-type: none"> <li>a) Coverpageshowingprojecttitle,student'sinformation,schoolandsession</li> <li>b) List of contents</li> <li>c) Acknowledgements and preface</li> <li>d) Introduction</li> <li>e) Rationale Purpose) –There as on for the choice of the subject and its social significance.</li> <li>f) Methodology Technique - Mention the methodology e.g. questionnaire, case study, ethnographic description The students may use any method which is appropriate for the topic selected. Detailed steps and procedures adopted must be given.</li> <li>g) Presentation of evidence-There must be a major section formally presenting the Evidence gathered as a part of the project. This can be in the form of tables, extracts from interviews, reports on case studies or discussion of documentary data (newspapers, articles, magazines, diaries, photographs). However, there should be value addition by the student and it must not be a simple reproduction of the original material.</li> <li>h) Analysis of evidence &amp; conclusions - Each project should summarize its conclusions in a separate section. This can be brief but should be clearly and carefully stated. If possible, some suggestions can be given for further enhancement in the areal subject studied. This section can also include a statement describing the limitations of the study.</li> <li>i) Bibliography/ Appendix or other supporting material - This should include the references to relevant books and other sources used for the study. The appendix will include questionnaires, list of interviews, documents or any other material used in the Study.</li> </ol> </li> </ol>
Accountancy	<p>Prepare a Comprehensive Project based on collection of various source documents like Pay-in-Slip, Cheque, Cash Memo, Invoice and bill, Receipt, Debit and Credit Note etc.from different business institutions and also prepare accounting vouchers (cash and transfer voucher) for various financial transactions shown in source documents.</p> <p><b>IMPORTANT INSTRUCTIONS:</b></p>

	<p><b>The project report will be developed in the following sequence-</b></p> <ul style="list-style-type: none"> <li>• <b>Cover Page</b></li> <li>• <b>Certificate</b></li> <li>• <b>Acknowledgement</b></li> <li>• <b>Index</b></li> <li>• <b>Performa of source documents and vouchers</b></li> <li>• <b>Detailed information</b></li> <li>• <b>Bibliography</b></li> </ul>
Political Science	<p><b>GUIDELINES FOR PROJECT WORK</b></p> <p>Political Science as a field of study in senior secondary classes enable students to get an exposure to political activities and processes that they are exposed to in everyday life. The study of political science has emerged as a multifaceted discipline,</p> <p>Involving a contemporary interdisciplinary approaches and empirical framework, emphasizing more on field work rather than theoretical perceptions. The connect between government and citizen ensures the emergence of an active and reflective Citizens and vibrant democracy. CBSE has therefore incorporated project work in Political Science to enable students to extend their interest beyond textbooks and provide them with a platform to gather information, value the decisions made to Shape the community and visualize future course of action to be taken to ensure healthy democracy.</p> <p><b>Objectives of project work:</b></p> <ol style="list-style-type: none"> <li>1. To enable learners to probe deeper, initiate action and reflect on knowledge and skills acquired during the course of class XI.</li> <li>2. To analyze and evaluate real world scenarios using social constructivism, a theory based on observation and scientific study</li> <li>3. To become independent and empowered to choose their topic and gather data from a variety of source, investigate varied viewpoints acquired during the course XI and arrive at logical deductions.</li> <li>4. To enquire into, and reflect on, issues independently /in collaboration with others and identify the limitations.</li> <li>5. To develop 21st century skills of communication, cooperation, coordination, critical thinking, creativity and collaboration to produce an extended and independent work.</li> <li>6. Students can use primary sources available in city archives, Primary sources can also include newspaper cuttings, photographs, written/speeches. Secondary sources may also be used after proper authentication.</li> </ol> <p><b>Suggested Topics</b></p> <ol style="list-style-type: none"> <li>1. Making of the Constitution</li> <li>2. Elections in India.</li> </ol>



	<p>3. Working of the Indian Judiciary System.  4. Social Justice: Are ethics followed in Indian Politics  5. Human Rights Act and its gratification in India.  6. Political impact on Indian Legislation.  7. Citizenship amendment act  8. Uniform civil code  9. General Election 2024  10. Article 370 : End to special status  11. One nation one election  12. Israel- Palestine conflict.  <b>Note- 1.</b>Student can go with the topic he/she wishes to.  <b>2.</b> Topics of current politics can also be chosen as a project work but it should be satisfactory with the guidelines.</p>
Economics	<ul style="list-style-type: none"> <li>• The students will complete only ONE project.</li> <li>• Project should be of 3,500-4,000 words (excluding diagrams &amp; graphs), preferably hand-written.</li> <li>• It will be an independent, self-directed piece of studyThe students are required to carry out a survey on any current topic of their interest and will also prepare a questionnaire; the responses will be collected from at least 50 respondents. It is important to note that the questionnaire will be sent through mailed questionnaire method .Thereafter, organization of the data will be done. The data will be then, presented and analyzed to arrive at conclusions.</li> <li>• <b><u>Mode of presentation/submission of the Project:</u></b>At the end of the stipulated term, each student will present the research work in the Project File to the examiner. The questions should be asked from the Research Work/ Project File of the learner. The project report must consist of the following: <ul style="list-style-type: none"> <li>• Introduction of topic/title.</li> <li>• Identifying the impact, consequences etc of the topic chosen.</li> <li>• Various stakeholders and effect on each of them.</li> <li>• Advantages and disadvantages of situations or issues identified.</li> <li>• Short-term and long-term implications of economic strategies suggested in the course of Research.</li> <li>• Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file.</li> <li>• Presentation and writing that is succinct and coherent in project file.</li> <li>• Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.</li> </ul> </li> </ul>
Applied Mathematics	Activity 1 -To find the number of subsets of a given set and verify that if a set has n

	<p>number of elements, then the total number of subsets is <math>2^n</math>.</p> <p>Activity 2 - To verify that for two sets A and B, <math>n(A \times B) = p \times q</math> and the total number of relations from A to B is <math>2^{pq}</math>, where <math>n(A) = p</math> and <math>n(B) = q</math>.</p> <p>Activity 3 -To represent set theoretic operations using venn Diagrams.</p> <p>Activity 4 -To verify distributive law for the three given non-empty sets A, B and C that is <math>A \cup (B \cap C) = (A \cup B) \cap (A \cup C)</math>.</p> <p>Activity 5 -(i) Define Common and General Logarithm and draw the graphs of both.</p> <p>(ii) Write at least five properties of logarithm</p> <p>(iii) Write the conversion formula from common to general Logarithm/ Relation between common and general Logarithm</p>
Psychology	<ul style="list-style-type: none"> <li>● Exploring the Intersections of Psychology with Various Disciplines</li> </ul> <p>Psychology is a multifaceted discipline that influences various fields, ranging from business to healthcare and beyond. Approach different individuals from various backgrounds and discuss how psychology relates to their field. Document and prepare a report on it. Take at least 5 disciplines. This assignment aims to explore the connections between psychology and different disciplines, highlighting how psychological principles intersect with and impact each field.</p> <p>Report Preparation:</p> <ul style="list-style-type: none"> <li>● Introduction to Each Discipline: Provide a brief overview of each discipline and its relevance to psychology.</li> <li>● Interview Findings: Summarize the key points discussed in each interview, highlighting specific psychological concepts and their application within the respective field.</li> <li>● Comparative Analysis: Compare and contrast the ways in which psychology intersects with each discipline, identifying common themes and unique applications.</li> <li>● Implications and Future Directions: Discuss the potential implications of understanding these intersections for each field and propose areas for further research or collaboration between</li> </ul>

	<p>psychology and the respective disciplines.</p> <ul style="list-style-type: none"> <li>• Conclusion: Summarize the main findings of the assignment and emphasize the importance of interdisciplinary collaboration in advancing knowledge and practice across diverse fields.</li> <li>• References: Provide a list of references cited throughout the assignment, including academic articles, books, and interviews.</li> </ul> <p>Note: Please ensure to obtain consent from interviewees for participation and citation in the assignment.</p>
Computer Science	<p>Do the following questions in the practical file of Computer Science:</p> <p>Q1. WAP to calculate the sum of two numbers.</p> <p>Q2. WAP to calculate the area and perimeter of the rectangle.</p> <p>Q3. WAP to calculate the area of the square.</p> <p>Q4. WAP to calculate the area of the triangle.</p> <p>Q5. WAP to input the name of the student and marks obtained from the user. Compute the percentage and print the output in the following format: “Name of Student” has scored _____ “% of marks”.</p> <p>Q6. WAP to find the square root of a number. The number must be input by the user.</p> <p>Q7. WAP to swap two variables. The variables must be entered by the user.</p> <p>Q8. WAP to covert Kilometers to Miles. The Kilometers distance must be entered by the user.</p> <p>Q9. WAP to convert Celsius to Fahrenheit. The Celsius temperature must be entered by the user.</p> <p>Q10. WAP to calculate the remainder. The divisor and dividend must be entered by the user.</p>
Entrepreneurship	<p style="text-align: center;"><b><u>‘Market Survey’</u></b></p> <p>The students are required to prepare a market survey as per the guidelines issued by CBSE (available on <a href="http://www.cbse.academics.in">www.cbse.academics.in</a>). Submit a project report having essential features as follows:</p> <ul style="list-style-type: none"> <li>• Conduct a simple market research with the objectives of estimating demand for the existing product in the market.</li> <li>• Do research in the form of Questionnaire (No of questions in Questionnaire is 15, with 4 option given in each question.)</li> <li>• Conduct the survey for the innovative product.</li> <li>• Selection of product was already discussed in the class 11 (Every student has to select different product as topic. <b>It should not be match with other students.</b>)</li> <li>• <b>While selecting the product keep in mind that product will be same in both the project</b></li> <li>• Avoid products whose use is banned by the society and government like alcohol, pan masala, tobacco products etc.</li> <li>• Project should be hand written.</li> </ul>

	<ul style="list-style-type: none"> <li>• Project must be presented in <b>A4 size sheets</b> (try to take colored and handmade sheets).</li> <li>• No cutting and overwriting is allowed. It should be a neat project.</li> <li>• Project must be creative and attractive.</li> </ul> <p><b>The project file will be developed in the following sequence-</b></p> <ul style="list-style-type: none"> <li>• Cover page</li> <li>• Certificate</li> <li>• Acknowledgement</li> <li>• Index</li> <li>• Executive summary / Introduction about product with photo</li> <li>• Objectives</li> <li>• General Features of the product</li> <li>• SWOT Analysis of different competitors (<b>at least take 5 competitors</b>) with photos, logo, tagline, USP and give your suggestions to the company as how they can improve their product</li> <li>• Respondents List (Questionnaire <b><u>must be filled by 20 respondents</u></b>)</li> <li>• Sample Questionnaire</li> <li>• Research Methodology</li> <li>• Analysis Table</li> <li>• Data analysis and interpretation of each question (with bar or pie diagrams)</li> <li>• Report Making</li> <li>• Appendix <ul style="list-style-type: none"> <li>✓ Questionnaire filled by 20 respondents</li> <li>✓ Bibliography</li> </ul> </li> </ul>
<p>Informatics Practices</p>	<p>Write a python program to track the medal tally for different countries in a Olympic Games.</p> <p>Medal Input: include user input the number of gold, silver, and bronze medals won by each participating country.</p> <p>Tally Display: To display the overall medal tally for all participating countries in the Olympic Games, sorted by the total number of medals won.</p> <p>Bonus Challenge: To enable users to dynamically add new countries to the medal tally of the Olympic Games in your program.</p>
<p>Physical Education</p>	<p>1.Prepare a record file on the following sub topics related to Basketball,Football,Kabaddi,Kho-Kho,Handball,Hockey,Cricket,Chess,Tennis,Table Tennis(Basketball+ Any one)</p> <ul style="list-style-type: none"> <li>• History of the game</li> <li>• Measurement of play field</li> <li>• Equipment of the game.</li> <li>• Latest General rules</li> <li>• Fundamental Skills</li> <li>• Terminology</li> <li>• Specific Exercises</li> <li>• Important tournaments</li> </ul>





*Do Your Assignments  
But Do Not Forget To Read Books  
Spend Time With Family & Friends  
Help Birds & Stray Animals*

*Learn A New Skill, Sharpen Your Talent*

*Come Back Rejuvenated, Relaxed, Refreshed, Revived, Recharged*

Classes

Nursery to VIII  
IX to XII

Summer Vacation

6th May 2024 to 25th June 2024  
25th May 2024 to 25th June 2024

*Happy  
Holidays*

