ST. MARY'S ACADEMY
SUMMER VACATION HOMEWORK, 2014

CLASS: 10 CAMBRIDGE

SUBJECT:	HOMEWORK
ENG	Write essays on the following topic in 400 - 500 words. 1. Write a comparison between two places that you have lived in. It could be a different country or a different house in the same city you grew up in. Describe the similarities and difference between the two places. How did moving house change your life? In what ways did it stay the same? 2. What would it be like to be a number instead of a name? Write about a situation in which your number was called out.
ACC	• Explain the term depreciation. Its methods of calculation. • State the reasons for accounting for depreciation. • Recording of depreciation of fixed assets using general. • Double entry to record disposal of fixed assets. • Need and format of bank reconciliation statement.
B.ST	Topics Include • Forms and different legal structure of businesses • Government macro-economic policies and external influence on business. • Economies and Diseconomies of scale. • Budgeting. • Breakeven analysis. •Importance of accounting and finance • Cash flow analysis • Ratio Analysis • Marketing research • Product • Price • Place • Promotion
ECO	Topics include: • Demand and supply • Market Structures (Monopoly & Perfect Competition) •Costs and Revenue Curves • Balance of Payment • Inflation • Trade Unions and wage differentials
COMP	Learn These Chapters Comprehensively: Chapter 3: Hardware Chapter 9: Algorithm Planning and Design Chapter 10: Program and Pseudo code Algorithm Chapter 11: Logic Gates and Circuits Cambridge Booklet 3 Syllabus Section 1.1.3: Data Storage Syllabus Section 1.2.1 Serial And Parallel Data Transmission Attempt all the Algorithm (Pseudo Code, Flowchart),Locate Errors in Algorithm And Trace Table Questions from last 10 Years Past Papers on Computer Notebook.
MATHS	Mathematics Book 1 (Topics) 1. Perimeter and area of geometric figures 2. Volume and surface area 3. Angle properties of polygons 4. Algebraic equations and simple in equalities 5. Ratio, rate and speed 6. Percentages Mathematics Book 2 (Topics) 1. Expansion and factorization of algebraic expressions 2. Algebraic manipulation and formulae 3. Simultaneous linear equations 4. Volume and surface area 5. Direct and indirect proportions 6. Pythagoras theorem Mathematics Book 3 All topics in book D-3 Mathematics Book 4 (Topics) 1. Graphical solutions of equations 2. Further graphs and graphs applied to kinematics 3. Vectors. **Note : All students are advised to revise these chapters thoroughly. After summer vacations first term exam will be held. Prepare for paper 1 and paper 2.**

SUBJECT:	HOMEWORK
ADD-MATHS	Additional Mathematics (only for add math students) Take ten questions from each chapter (chapters 1 to chapters 14) not from book (past papers) and solve them. These 140 questions must cover all concepts of each chapter. **Note : All students are advised to revise these chapters thoroughly. After summer vacations first term exam will be held. Prepare for paper 1 and paper 2.**
PHY	1. Write experiments for (along with fair and labelled diagrams and graphs) a. Proving Hooke's Law b. Determining density of an irregular shaped object. c. Determining value of acceleration of free fall. d. To prove laws of reflection of light. e. To mark upper and lower fixed points of mercury in glass thermometer. f. To prove that magnetic field lines of a magnet emerge from North pole of a magnet and are directed towards the South pole, on the outside of the magnet. g. Draw ray diagrams on half piece of chart paper for six positions of an object and relative position of images. Also show characteristics of images. h. Write definitions of specific Heat Capacities and Specific Latent Heat Capacity, their equations and units on the remaining half of the chart paper. i. Write experiment to prove laws of refraction of light. 2. Design one MCQ and one long question from each chapter of the book of Physics. The question must not be copied from the books. You can design it from your own experiences of life.
CHEM	Revise, and learn, using Chemistry Matters and teacher's notes, the following topics and solve 20 multiple choice questions(MCQs), 8 short questions(from section A paper 2) and 5 structured questions(from section B, paper 2) Chapter 1 : The Kinetic Particle Theory. Chapter 2 & 3: Methods of purification and experimental techniques. Chapter 4 &5: Elements, compounds and mixtures and Atomic structure. Chapter 6,7 & 8:Ionic Bonding, Covalent Bonding, metallic Bonding and structures and properties of simple molecules and macromolecules(Diamond , Graphite and Silics,SiO2), Writing Equations. Chapter 9 &10: The Mole Concept and Chemical Calculation. **Topics:** Redox, Speed of chemical reaction, Energy from chemicals, Electrolysis, Reversible reactions (Sulfuric acid & ammonia), Periodic table, Acid bases and salts. **Resource materials:** Chemistry Matters(Book), Teacher's for Basic concept and Theoretical knowledge. For Questions Bank: Chemistry Pure Topical, Classified topical and exercises from chemistry matters. **Note: Students will prepare and practice the alternative to practical's (ATP). This will be included in the first term exam as paper 4.**
BIO	• Solve CIE papers from May/June 2010- Oct/Nov 2013. • Paper 2 (Theory paper) [21, 22] for May/June, Oct/Nov 2010-2013. • Paper 6 (ATP) (61,62) May/June, Oct/Nov 2010-2013. • Submit solved hard copies of all these papers to respective teacher. • Solve only those questions which are taught in 8, 9, 10 camb.