



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

Subject	Focus	Activities	Useful website
Accounting	<ul style="list-style-type: none"> To analyse the usefulness of Managerial Accounting in businesses To develop independent problem-solving skills 	<ul style="list-style-type: none"> Revise all the topics covered so far in the AS level syllabus. Complete all MCQ questions and structures on the topics covered so far. Practice question from past paper 2016 – 2020 (Feb/March and May/June series) 	www.myaccountinglab.comwww.cie.org.uk
Arabic (Arabs)	<p>TOPIC</p> <p>البذل</p> <p>Learning objectives:</p> <p>. أن يحدد الطالب البذل في الجمل</p> <p>أن يوظف الطالب البذل في فقرة</p> <p>. شعر المتنبي -</p> <p>. أرق على أرق للمتنبي -</p> <p>Learning objectives:</p> <p>أن يحلل النص في سياقه التاريخي والاجتماعي</p>	<p>المعلم باب الحوار المنظم للاستماع إلى ملاحظات الطلاب *</p> <p>حول المفاهيم النحوية التي تعلموها</p> <p>(مثل لكل من (البذل -</p> <p>(عمل قطعة ويقوم الطلاب باستخراج (البذل -</p> <p>(قم بعمل خريطة ذهنية (البذل -</p> <p>إجراء اختبار ختامي قصير للتأكد من مستوى التعلم لدى -</p> <p>الطلاب من خلال ورقة عمل</p> <p>يحلل النص في سياقه التاريخي والاجتماعي</p> <p>يتتبع الأثر الذي يتركه أسلوب الكاتب ، واستخدامه *</p> <p>للتقنيات البلاغية</p>	<p>https://www.youtube.com/watch?v=ZwGlxw4ikOM</p> <p>https://www.youtube.com/watch?v=QkrBHWbdMiQ</p> <p>https://ar.wikipedia.org/wiki/%D8%A3%D8%A8%D9%88_%D8%A7%D9%84%D8%B7%D9</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>أن يتتبع الأثر الذي يتركه أسلوب الكاتب ، *</p> <p> . واستخدامه للتقنيات البلاغية</p> <p>TOPIC</p> <p>استجابة لنص أدبي -</p> <p>Learning objectives:</p> <p>(أن يقارن بين النص الشعري ونص آخر *</p> <p> . أن يكتب استجابة لنص أدبي-</p>	<p>(يقارن بين النص الشعري ونص آخر *</p> <p> يكتب موضوعا وصفيا باستخدام الاستعارة</p> <p>يعين الاستعارة في النصوص *</p> <p>ينتج فقرة تتضمن التشبيه التمثيلي *</p> <p> يكتب استجابة لنص أدبي *</p>	<p>https://dorar.net/hadith/sharh/7631</p>
Islamic Studies Arabs	<p>TOPIC: حادثة الإفك</p> <p>Learning objectives:</p> <p>أن يوضح موقف الرسول صلى الله عليه - وسلم من المنافقين في المدينة</p> <p>أن يستنتج أهمية المحافظة على الأعراض - في الشريعة الإسلامية</p> <p>رسول الله صلى الله عليه وسلم TOPIC: والحياة الاجتماعية</p>	<p>البحث عن قصة حادثة الإفك</p> <p>الاستشهاد على القصة من القرآن الكريم والسنة النبوية</p>	<p>https://dorar.net/hadith/sharh/7631</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	Learning objectives: أن يوضح حرص الرسول صلى الله عليه وسلم على توازن الأسرة أن يستنتج أهمية حسن المعاملة وبذل المعروف لجميع أفراد المجتمع	البحث عن أهم سمات الحياة الاجتماعية في حياة الرسول صلى الله عليه وسلم الاستدلال من الهدي النبوي على حسن المعاملة وبذل المعروف لجميع أفراد المجتمع	https://www.youtube.com/watch?v=cxRKisPOdks
Islamic Studies Non Arabs	TOPIC: THE ISLAMIC METHADODOGY OF FAMILY BUILDIND Learning objectives: -TO COMPREHEND THE IMPORTANCE OF A BALANCED FAMILY - TO EVALUATE THE CONSEQUENCES OF IMBALANCED FAMILY SYSTEM	WRITE AN ARTICLE THAT SHOWS HOW IMPORTANT IS A HAPPY AND BALANCED FAMILY TO BUILD A HAPPY AND BALANCED SOCIETY.ADD AN EXAMPLE FROM SEERAH ONE HADEETH AND , THAT SHOWS THE IMPORTANCE OF A HAPPY BALANCED FAMILY. WRITE DOWN AN ESSAY ON THE VIRTUES OF BEING POLITE TO OTHERS AND HOW THE LIFE OF PROPHET (P.B.U.H) CAN HELP US TO IMPROVE	https://www.youtube.com/watch?v=Un-96TCnffM https://www.youtube.com/watch?v=HreJejiqAlc&t=895s



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>TOPIC: ALLAH'S MESSENGER AND SOCIAL LIFE</p> <p>Learning objectives:</p> <p>To signify the keenness of Prophet (P.B.U.H) on building coherent society.</p> <p>-To infer a link between communal peace and the development of Islamic State.</p>	<p>OUR BEHAVIOUR TOWARDS OTHERS SOCIETY.</p>	
Biology	<p>Enzymes:</p> <ul style="list-style-type: none">• Explain that enzymes are globular proteins that catalyze metabolic reactions.• Explain the mode of action of enzymes in terms of an active site, enzyme/substrate complex, lowering of activation energy and enzyme specificity.• Explain the effects of reversible inhibitors, both	<ul style="list-style-type: none">• Create a Kahoot quiz on the topic enzymes.• Interpret different graphs on enzyme affinity.• Compare the affinities of enzymes with the help of KM using case-studies and relevant questions.	<p>https://youtu.be/mfC9RB7IL9A</p> <p>https://youtu.be/QU0VBcHnQOk</p> <p>http://www.cpalms.org/Public/PreviewResourceUpload/Preview/38326</p> <p>http://www.rpi.edu/dept/bcbp/molbiochem/MBWeb/mb1/part2/sugar.htm</p> <p>has a comprehensive review of carbohydrate structure including examples of polysaccharides</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>competitive and non-competitive, on the rate of enzyme activity.</p> <ul style="list-style-type: none"> To compare the maximum rate of reaction (V_{max}) and the enzyme affinity of different enzymes for their substrates using the Michaelis-Menten constant (K_m). Structure of proteins and their roles in living organisms <p><u>Mitotic cycle:</u></p> <ul style="list-style-type: none"> To describe the structure of a chromosome, limited to DNA, histone proteins, chromatids, centromere and telomeres. To explain the importance of mitosis in the production of genetically identical cells, growth, cell replacement, repair of tissues and asexual reproduction. 	<ul style="list-style-type: none"> Compare the efficacy of mobilized and immobilized enzymes and elaborate its application. Create a model of mitotic cycle including all the stages. Create a big wheel of mitotic cycle to learn more about each stages. For all music lovers! Create a rap on mitotic cycle. Students can make a jigsaw puzzle on the significance of mitosis. 	<p>http://www.calfnotes.com/pdf/CN102.pdf</p> <p>https://alevelnotes.com/Lipids/58</p> <p>http://study.com/academy/lesson/structure-and-function-of-lipids.html</p> <p>http://biology4alevel.blogspot.ae/2014/08/10-lipids.html</p> <p>https://youtu.be/VGHD9e3yRIU</p> <ul style="list-style-type: none"> https://www.khanacademy.org/science/biology/structure-of-a-cell/cytoskeleton-junctions-and-extracellular-structures https://www.pinterest.com/pin/AWcOObfxyUDe7EbxhdRH4B4aF5ufa3ZLUXNfzkrv8OAzd6PC935YiGE/ https://www.pinterest.com/pin/539306124111951378 https://www.youtube.com/watch?v=pOsAbTi9tHw&feature=youtu_gdata_player
--	--	--	---



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<ul style="list-style-type: none"> To outline the significance of mitosis in cell replacement and tissue repair by stem cells and state that uncontrolled cell division can result in the formation of a tumor. To describe, with the aid of photomicrographs and diagrams, the behavior of chromosomes in plant and animal cells during the mitotic cell cycle. <p>Nucleic acids and protein synthesis</p> <p>To Describe the structure of nucleotides, including the phosphorylated nucleotide ATP</p> <ul style="list-style-type: none"> To describe the structure of RNA and DNA and explain the importance of base pairing and the different hydrogen bonding between bases. To describe the semi-conservative replication of DNA during interphase 	<ul style="list-style-type: none"> Students can make a case study on the chromosomal disorders in various case. To prepare microscopic slides using onion root tip squash to observe the different mitotic stages Simulation/ undergo virtual labs for DNA structure and replication games activities using the link below. Create 10 Effective quick questions on DNA synthesis using bloom's taxonomy. Create separate flow charts on DNA synthesis, RNA transcription and Translation of protein with emphasis on enzymes used. 	<ul style="list-style-type: none"> https://www.pinterest.com/pin/ARWd9Q1nOF4ReNCKu4MPLUR9ZzPNgP9tnb52RIk03tfaHAIPXOc3ws/ http://quantumneurology.com/case-study-chromosomal-disorder-mosaic-trisomy-22/ https://www.nature.com/scitable/forums/genetics-generation/case-study-in-genetics-and-mental-illness-104902581 http://www.nuffieldfoundation.org/practical-biology/investigating-mitosis-allium-root-tip-squash http://www.hhmi.org/biointeractive/dna/index.html https://www.ncbi.nlm.nih.gov/books/NBK26821/ http://www.mrothery.co.uk/genetics/dnanotes.htm#Structure%20of%20DNA https://youtu.be/Ec2I2caFjMw https://youtu.be/qoERVSWKMGk https://youtu.be/W4mYwsr9gGE
--	---	---	--



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<ul style="list-style-type: none">• To state that a polypeptide is coded for by a gene and that a gene is a sequence of nucleotides that forms part of a DNA molecule• To state that a gene mutation is a change in the sequence of nucleotides that may result in an altered polypeptide• To describe the way in which the nucleotide sequence codes for the amino acid sequence in a polypeptide with reference to the nucleotide sequence for HbA (normal) and HbS (sickle cell) alleles of the gene for the β-globin polypeptide• To describe how the information in DNA is used during transcription and translation to construct polypeptides, including the role of messenger RNA	<ul style="list-style-type: none">• Draw a poster on DNA synthesis highlighting replication fork, okazaki fragments and 5 prime to 3 prime direction of DNA synthesis• Work out on mathematical justification of Chargaff rule, how 4 nitrogenous bases code for 20 amino acids.• http://www.yourgenome.org/activities/origami-dna• https://geneed.nlm.nih.gov/topic_su_btopic.php?tid=15&sid=16• http://www.pbslearningmedia.org/resource/tdc02.sci.life.repro.lp_dnastructure/modeling-dna-structure/• https://www.merlot.org/merlot/viewMaterial.htm?id=297572• http://www.genomebc.ca/education/teachers/activities/	<ul style="list-style-type: none">• http://accessexcellence.org/AB/GG/• http://www.s-cool.co.uk/a-level/biology/dna-and-the-genetic-code/reverse-it/dna-replication• http://www.thealevelbiologist.co.uk/replication-of-dna• https://youtu.be/cOw41Xa_uY• https://youtu.be/guuJ_gayk70• https://youtu.be/mfnDVV518es• https://youtu.be/TNKGWgcFPHqw• http://www.hhmi.org/biointeractive/search?sort_by=created&redirect=1&field_biointeractive_types%5B0%5D=26700• http://www.learnaboutsma.org/science/1.html• https://youtu.be/dijqYyFY1GM• https://youtu.be/mGgYTdPYQjA• http://www.ncbe.reading.ac.uk/ncbe/PROTOCOLS/DNA/extracting.html• http://learn.genetics.utah.edu/content/labs/extraction/• https://youtu.be/cepY-Qoc5pw
--	--	---	---



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	(mRNA), transfer RNA (tRNA) and the ribosomes		
Business Studies	<p><u>Unit - Finance and Accounting</u></p> <p>Topic – Absorption Costing and Contribution Costing</p> <p>To evaluate the significance of Absorption Costing and Contribution Costing using real-world context</p>	<p>Research and produce a Report on how different businesses and industries may choose to allocate costs in different ways and the problems associated with allocation, e.g.:</p> <ul style="list-style-type: none">• travel industry - how can the fixed cost of a bus/airplane be allocated to individual passenger prices?• Coca-Cola - how can indirect costs be allocated across the range of drinks produced by the brand?• Apple – if costs for product development are allocated to each product, how might this affect the perceived profitability of a new iPad?	<p>www.bized.co.uk</p> <p>www.tutor2u.net</p> <p>www.s-cool.co.uk</p> <p>www.businesscasestudies.co.uk</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

			Text Books/journals
Chemistry	AN INTRODUCTION TO ORGANIC CHEMISTRY: <ul style="list-style-type: none">To understand the terms empirical, molecular and structural formulae, homologous series and functional groups.To apply IUPAC rules to naming organic compounds with up to six carbon atoms and containing up to two functional groups.To describe and explain structural isomerism for aliphatic compounds containing up to six carbon atoms; and	Activity 1: <p>Giving out molecular modelling kits and get students to build simple straight-chain alkanes from methane to hexane</p> Activity 2: <p>Compare the empirical, Molecular and structural formulae of organic compounds as a poster activity.</p> Activity 3: <p>Practice drawing the structural and stereoisomers of organic compounds</p>	http://www.chemistryrules.me.uk/candr/nomenclature.htm https://www.chemguide.co.uk/basicorg/isomermenu.html https://www.mytutor.co.uk/answers/69/A-Level/Chemistry/What-is-the-difference-between-structural- http://www.docbrown.info/page06/FunctionalGroups.htm http://www.docbrown.info/page14/page14orgnomencl.htm



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<ul style="list-style-type: none">To understand that stereoisomers (geometrical) exist (alkenes) in cis and trans (E-Z) forms due to the energy barrier to rotation in these	Activity 5: Prepare a brochure for Rules of naming organic compounds along with the properties of homologous series.	
	<p><u>RATE OF REACTION</u></p> <ul style="list-style-type: none">Explain and use the term <i>rate of reaction</i>Explain qualitatively, in terms of collisions, the effect of concentration changes on the rate of a reactionConstruct and interpret a reaction pathway diagram, in terms of the enthalpy change of the reaction and of the activation energyExplain and use the term <i>catalysis</i>explain that catalysts can be homogenous or heterogeneous	<p>ACTIVITY 1</p> <ul style="list-style-type: none">Research the definition of rate of reaction and correlate it to any physics quantity. Also find out about what makes reaction to occur. <p>ACTIVITY 2</p> <ul style="list-style-type: none">Plan an experiment to investigate rate of reaction. <p>ACTIVITY 3</p> <ul style="list-style-type: none">Create an infographic poster about catalysis. Include definition, types and how does catalyst enhances speed of reaction. <p>ACTIVITY 4</p>	<p>http://www.s-cool.co.uk/a-level/chemistry/reaction-kinetics</p> <p>http://www.chemistryrules.me.uk/hfhf/hfhf3.htm</p> <p>http://www.docbrown.info/page03/ASA2rates.htm</p> <p>https://www.youtube.com/watch?v=ictsM6ISVDA</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<ul style="list-style-type: none">• Explain that, in the presence of a catalyst, a reaction has a different mechanism, i.e. one of lower activation energy• Interpret this catalytic effect in terms of the Boltzmann distribution• describe enzymes as biological catalysts (proteins) which may have specificity• explain and use the term activation energy, including reference to the Boltzmann distribution• Explain qualitatively, in terms both of the Boltzmann distribution and of collision frequency, the effect of temperature change on the rate of a reaction <p><u>Enthalpy changes</u></p> <p>Explain that chemical reactions are accompanied by energy changes, principally in the form of heat energy; the energy changes</p>	<ul style="list-style-type: none">• Create a simulation to explain the Boltzmann distribution curve to your peers. <p>ACTIVITY 5</p> <ul style="list-style-type: none">• Create a CV for the biocatalyst. <p>ACTIVITY 6</p> <ul style="list-style-type: none">• Create a list of questions using the Bloom's taxonomy.	<p>http://www.chemguide.co.uk/physical/energetics/sums.html</p> <p>http://chubbyrevision.weebly.com/energetics.html</p> <p>http://www.ocr.org.uk/Images/208647-enthalpy-changes-delivery-guide.pdf</p>
--	---	--	--



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>can be exothermic (ΔH is negative) or endothermic (ΔH is positive)</p> <p>Show understanding of chemical reactions in terms of energy transfers associated with the breaking and making of chemical bonds</p> <p>Explain the terms bond energy, bond length and bond polarity and use them to compare the reactivities of covalent bonds</p> <p>Explain enthalpy change of reaction and standard conditions, with particular reference to: formation, combustion, hydration, solution, neutralisation, atomisation</p> <p>(ii) bond energy (ΔH positive, i.e. bond breaking)</p>	<p>Activity 1:</p> <p>Make a power point presentation to show the relationship between bond energy and enthalpy change (use minimum 5 examples in your PPT)</p> <p>Activity 2:</p> <p>Bromine reacts with iodine to form iodine monobromide, IBr.</p> <p>The table below lists some average bond enthalpies which are required in different parts of this question.</p> <table><tr><th>Bond</th><th>Average bond enthalpy / kJ mol⁻¹</th></tr><tr><td>Br–Br</td><td>+193</td></tr><tr><td>I–I</td><td>+151</td></tr><tr><td>I–Br</td><td>+175</td></tr></table> <p>(i) Why do Br₂ and I₂ not exist in the gaseous state under standard conditions?</p>	Bond	Average bond enthalpy / kJ mol ⁻¹	Br–Br	+193	I–I	+151	I–Br	+175	<p>http://www.swotrevision.com/pages/alevel/chemistry/m3_part2.htm</p> <p>http://www.chemguide.co.uk/physical/basicrates/menu.html</p>
Bond	Average bond enthalpy / kJ mol ⁻¹										
Br–Br	+193										
I–I	+151										
I–Br	+175										



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

		<p>(ii) Calculate the enthalpy change of formation, ΔH_f, for IBr.</p> <p>Activity 3: Practice drawing energy cycles and application of Hess's law.</p> <p>Activity 4:</p> <p>Solve past paper questions based on enthalpy changes.</p>	
Economics	<p>Discuss the causes and consequences of Inflation and Unemployment</p> <p>Revision on all AS topics</p>	<ul style="list-style-type: none"> Students discuss difficulties involved in arriving at an accurate unemployment figure and as a result, a number of different approaches are used. Students using case studies/ newspaper articles which illustrate various causes of unemployment. Discuss the consequences of unemployment through research activities. Through ED puzzle video students illustrate the stages of building the CPI. Learners research which types of inflation currently exist in their own country's economy and provide supporting evidence for each. Research activity. In groups, learners: <ul style="list-style-type: none"> analyse the consequences of inflation in their chosen economy 	<p>http://www.economicsonline.co.uk/Global_economics/Inflation.html</p> <p>https://www.tutor2u.net/economics/refere_nce/inflation-measuring-inflation</p> <p>http://www.tutor2u.net/economics/revision-notes/as-macro-inflation.html</p> <p>http://www.tutor2u.net/economics/present_ations/aseconomics/macro/Inflation/</p> <p>http://www.tutor2u.net/economics/revision-notes/a2-macro-economic-growth-costs-benefits.html</p> <p>https://youtu.be/iCRQdabmixc</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

		<ul style="list-style-type: none">○ identify and explain at least three different consequences○ attempt to assess their order of importance.• Students in groups explain and discuss the links between inflation and unemployment and the theory which underpins this.• Topic based revision UNIT 1,2 and 4.	
Mathematics Edexcel			
Psychology	Cognitive approach	Create a diagram of how a computer works and consider the analogy that their mind works	AS /A level Psychology textbook or any other General Psychology textbooks.



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>Focus on :-</p> <ul style="list-style-type: none">• Key assumptions of cognitive approach.• Key studies under cognitive approach.• Issues and debates surrounding cognitive approach.• Research method used by cognitive approach• Strengths and weakness of using cognitive approach.	<p>'like a computer'. Identify any strengths or weaknesses of adopting that model.</p>	<p>You may refer to the below links for additional information.</p> <p>https://www.youtube.com/watch?v=VcaAVWtP48A</p> <p>https://drive.google.com/file/d/19e7XhT-gSF4CR7OqN5DgDnE_Z4vP1tQ-/view</p> <p>http://pignottia.faculty.mjc.edu/math134/homework/doodlingCaseStudy.pdf</p>
Physics	<p><u>Electricity</u></p> <p>Derive $I=nAvq$ for a current carrying conductor</p> <p>Sketch V-I characteristics of different non ohmic conductors</p> <p>Explain changes in resistance for non ohmic conductors</p> <p>Analyze the concept of quantisation of electric charge</p>	<p>Research on practical circuits in which non ohmic conductors are used</p> <p>Explain what is meant by charge is quantized.</p> <p>Derive step by step, the equation for current</p>	<p>https://www.youtube.com/watch?v=gexWOaPHjBs</p> <p>https://studylib.net/doc/15252631/tap-104--2--derivation-of-i-%3D-navq</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p><u>Momentum</u></p> <ul style="list-style-type: none">To apply the principle of conservation of momentum to solve simple problems, including elastic and inelastic interactions between bodies in one and two dimensions	<ul style="list-style-type: none">A snooker ball strikes stationary ball. The second ball moves off sideways at 60° to the initial path of the first ball. Use the idea of conservation of momentum to explain why the first ball cannot travel in its initial direction after the collision. Illustrate your answer with a diagramPractice numerical problems applying the conservation of momentum principle.	<p>https://www.vedantu.com/question-answer/give-the-nature-of-vi-graph-for-iahmic-class-12-physics-cbse-5f5af45c8f2fe24918abb20c</p> <p>https://www.s-cool.co.uk/a-level/physics/momentum-and-impulse/revise-it/principle-of-the-conservation-of-momentum</p> <p>https://www.physicsclassroom.com/class/momentum/u4l2b.cfm</p>
Sociology	<p>Topic – Family</p> <p>Functionalist accounts of how the family benefits its members and society and how the functions of families have changed over time,</p>	<p>Create a Infographic evaluating the functionalist, Marxist and Feminist views on the functions of the family</p>	<p>https://www.tutor2u.net/sociology/reference/families-functionalism</p> <p>https://revisesociology.com/2020/06/05/what-are-the-functions-of-the-family-today/</p> <p>https://open.lib.umn.edu/sociology/chapter/15-2-sociological-perspectives-on-the-family/</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>including the 'loss of functions' debate.</p> <ul style="list-style-type: none">• Marxist accounts of how the family benefits capitalism, including ideological control, reproduction of labour and consumption.• Feminist responses to functionalist and Marxist accounts of the role of the family.		
English Language	<i>Directed writing</i>	You have watched the movie Lincoln (2012). Research on the life of Lincoln Read the articles provided in the link. Share how the article aids or alters your understanding of Abraham Lincoln.	http://news.nationalgeographic.com/2015/04/150418-abraham-lincoln-funeral-train-railroad-civil-warhistory/



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

Art and Design	AO1 and AO2 learners to explore and build on their subject of interest. To encourage independent expression and the development of a critical, reflective practice. To accommodate a wide range of abilities, materials and resources, and allow the different skills to be fully exploited critically.	Communication: purposeful trials of art works to communicate, from the simplest sketch to the most complex work. The need to understand the relationship about the chosen subject and the works that will build on critical and purposeful influences transformed into original outcome.	www.studentartguide.com
Information Technology	To Explain why Esafety is important and why data should be kept confidential • Describe potential health hazards associated with the use of computer. • Justify the use of various preventive methods to protect computer viruses.	Activities: Students to create a website on Esafety highlighting key points on how to keep ourselves safe online. Create online posters and presentations on Esafety. Students to work on advanced Database and spreadsheet concepts and Past paper Practice	Text book International Education Programmes and Qualifications (cambridgeinternational.org)
Computer Science	Programing concepts: • To recognize the basic control structures in a high-level language other than the one chosen to be studied in depth • appreciate that program coding is a transferable skill	Encourage your child to develop a software project to include the following: For example, if the chosen programming language is VB, give a program written in Pascal. Ask learners to translate the program in the chosen programming language. The result should be tested to see if it produces the correct output.	Commenting programs: http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem Solving, Programming, Data Representation and Practical Exercise/Fundamentals of Programming/Comments Inputs and outputs in programming:



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

			http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem Solving, Programming, Data Representation and Practical Exercise/Fundamentals of Programming/Input and output Operators: http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem Solving, Programming, Data Representation and Practical Exercise/Fundamentals of Programming/Arithmetic operators www.pp4s.co.uk/main/tu-op-intro.html
Travel and Tourism	<ul style="list-style-type: none"> To Analyse the advantages and disadvantage of Market research techniques. To evaluate the methods for assessing the quality of customer service. 	Research on: <ul style="list-style-type: none"> Benchmarking, performance management, customer feedback, online and social media ratings, market research techniques. Used by different travel and tourism organisation. Analyse the advantage and disadvantage of these methods. 	http://www.tourismdev.com/Market Research/Default.114.html BAE929AE929&oq=bench&gs_lcrp=EgZjaHJvbWUqCQgCEAAyQxiKBTIRCAAQRrg5GEMYgwEYsQMYigUyDwgBEAAyQxiAxjJAXiKBTIJCAIQA_BhDGloFMgoIAxAAGJIDGloFMgoIBBAAGLEDGIAEMgcIBRAAGIAEMgcIBhAAGIAEMgcIBxAAGIAEMg0ICBAuGK8BGMcBGIAEMg0ICRAuGK8BGMcBGIAE0gEIMzU4OGowajmoAgCwAgA&sourceid=chrome&ie=UTF-8



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

Statistics 1	<p>Topic: <u>Discrete random variables</u></p> <ul style="list-style-type: none"> Draw up a probability distribution table relating to a given situation involving a discrete random variable X, and calculate $E(X)$ and $Var(X)$. <p>Topic : <u>Permutation and combination</u></p> <ul style="list-style-type: none"> Understand the terms permutation and combination, and solve simple problems involving selections. solve problems about arrangements of objects in a line, including those involving repetition and restriction. 	<p>Model a situation on discrete random variable from a real life situation.</p> <p>Research and present your work on application of permutation and combination in real life.</p>	<p>https://revisionmaths.com/advanced-level-maths-revision/statistics/discrete-random-variables</p> <p>https://www.youtube.com/watch?v=oHcrna8Fk18&list=PLvxOuBpazmsNIHP5cz37oOPZx0JKyNsZN</p> <p>https://revisionmaths.com/advanced-level-maths-revision/statistics/permutations-and-combinations</p> <p>https://www.youtube.com/watch?v=zQAmwgZgObk</p>
<u>Mathematics</u>	<p><u>Pure Mathematics 1</u></p> <p>Arithmetic and Geometric Series</p> <ul style="list-style-type: none"> Recognize AP and GP. To apply the formula for nth term and sum of AP and GP to solve problems. Apply the formula for sum to infinity of a convergent GP. 	<p>Evaluate sequences to find the nth term and sum of AP and GP. Justify the condition for a convergent GP. Evaluate questions that may involve more than one progression.</p>	<p>https://mathspace.co/textbooks/syllabuses/Syllabus-1082/topics/Topic-21068/subtopics/Subtopic-273189/</p>



The Winchester School



Aim High Progress Study Programme _ (Year 12) –November _2023

	<p>Functions:</p> <ul style="list-style-type: none">• Identify the range of a given function and find the composition of two given functions• Illustrate the relation between a one – one function and its inverse• Understand and use transformations of the graph of $y = f(x)$	<p>Research on the real-life applications of functions.</p> <p>Make notes on different transformations on the function $y = f(x)$ with examples. Take coordinates of any 2 points, find midpoint, length and gradient of the line joining them using required formulae.</p>	<p>https://www.intmath.com/functions-and-graphs/2a-domain-and-range.php</p> <p>https://mathbitsnotebook.com/Algebra1/Functions/FNDomainRange.html</p> <p>https://www.bbc.co.uk/bitesize/guides/z3brdmn/revision/4</p> <p>https://www.onlinemathlearning.com/function-transformation-hsf-bf3.html</p> <p>https://revisionmaths.com/advanced-level-maths-revision/pure-maths/geometry/coordinate-geometry</p>
--	---	--	--