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Aim High Progress Study Programme _ (Year 12) –February_2023

Subject	Focus	Activities	Useful website
Accounting	<ul style="list-style-type: none">To analyze the structure of limited companies and the sources of raising capital.To describe the type of businesses that would use of unit, job and batch costing system. To apply costing concepts to make business decisions and recommendations.	<ul style="list-style-type: none">Prepare a sway presentation analyzing the structure of limited companies which should include the following –<ul style="list-style-type: none">➤ Features of limited companies➤ Share capital - meaning of and accounting for➤ Capital and revenue reserves➤ Loan capital➤ Preparation of internal final accounts and balance sheets of limited companies.Present a write up on type of businesses that would use of unit, job and batch costing system. OR <ul style="list-style-type: none">Prepare a Ted Ed Flipped Lesson on the topic.	<p>www.myaccountinglab.com,</p> <p>www.bized.co.uk</p> <p>www.cie.org.uk,</p> <p>http://www.accounting-world.com/</p> <p>https://www.investopedia.com/</p> <p>https://study.com/search/text/academy.html?q=accounting#/topresults/accounting</p>
Arabic	<p>TOPIC:</p> <p>مراجعة على أنواع التشبيه والاستعارة</p> <p>(أثناء)</p>	<p>ارسم خريطة ذهنية موضحاً فيها انواع التشبيه مع التمثيل</p> <p>عبر عن المواقف بجمل من إنشائك تحوي التشبيه -</p>	<p>https://www.youtube.com/watch?v=Mat6R0toigl</p>



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	<p>Learning objectives:</p> <p>أن يقارن بين أنواع التشبيهات و التشبيه التمثيلي .</p> <p>أن يحلل التشبيه التمثيلي موضحا موطن الجمال فيه .</p> <p>أن ينتج فقرة تتضمنه -</p> <p>أن يتعرف الاستعارة ويستخدمها في كتابة فقرة *</p> <p>TOPIC</p> <p>البدل</p> <p>Learning objectives:</p> <p>أن يحدد الطالب البدل في الجمل</p> <p>أن يوظف الطالب البدل في فقر</p>	<p>مَثَل لكل نوع من أنواع التشبيه</p> <p>حول الأمثلة من تشبيه تام أو بليغ إلى تشبيه تمثيلي - والعكس.</p> <p>يفتح المعلم باب الحوار المنظم للاستماع إلى ملاحظات - الطلاب حول المفاهيم النحوية التي تعلموها</p> <p>(مَثَل لكل من (البدل -</p> <p>(عمل قطعة ويقوم الطلاب باستخراج (البدل -</p> <p>(قم بعمل خريطة ذهنية (البدل -</p> <p>إجراء اختبار ختامي قصير للتأكد من مستوى التعلم لدى - الطلاب من خلال ورقة عم</p>	<p>https://www.youtube.com/watch?v=ZwGlxw4ik0M</p>
<p>Islamic Studies Arabs</p>	<p>TOPIC: فقه ترتيب الأعمال بحسب مقاصدها - الزواج طريق الاستعفاف</p>	<p>1. يخمن الأخطار المترتبة على عدم تيسير الزواج 2. يبين مخاطر جريمة البغاء على الفرد والمجتمع</p>	<p>https://www.youtube.com/watch?v=3L3Les9Cnic</p>



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	<p>Learning objectives:</p> <p>1. يستنتج تدابير مكافحة الزنا 2. يوضح دلالات الآيات القرآنية</p> <p>3. يوضح مفهوم فقه ترتيب الأعمال يستنتج أهمية فقه ترتيب الأعمال</p>	<p>3. يطبق فقه ترتيب الأعمال في المسائل المختلفة 4. يذكر بعض النماذج من فقه ترتيب الأعمال</p>	<p>https://www.youtube.com/watch?v=gntzG3-nxCc</p>
<p>Islamic Studies Non -Arabs</p>	<p>TOPIC: THE ARABIC LANGUAGE & CULTURE</p> <p>Learning objectives:</p> <p>- To explicate the Arabic civilization prior to Islam</p> <p>- To define the characteristics of Arab Islamic Culture.</p> <p>TOPIC: RESPONSIBILITY IN ISLAM</p> <p>Learning objectives:</p>	<ul style="list-style-type: none">● WRITE DOWN AN ARTICLE ON THE BENEFITS OF KEEPING THE LANGUAGE INTACT AND HOW DOES IT BENEFIT US TO KEEP OUR IDENTITY SAFE. GIVE EXAMPLES FROM DAY TO DAY LIVES TO PROVE YOUR POINT OF VIEW.● WRITE A JOURNAL ON HOW HAS U.A.E ENCOURAGE THE EMIRATI YOUTH TO TAKE INDIVIDUAL AND	<p>https://www.youtube.com/watch?v=jv8m8rycnQs&ab_channel=TEDxTalks</p>



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	<p>-To distinguish between individual and collective responsibility.</p> <p>-To comprehend the importance and significance of responsibility in Islam</p>	<p>COLLECTIVE RESPONSIBILITY AND HOW DOES IT HELP TO CONTRIBUTE IN THE PROGRESS OF SOCIETY.</p>	
<p>Biology</p>	<p><u>The Cell 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. 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. 	<ul style="list-style-type: none"> 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. 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 	<ul style="list-style-type: none"> https://www.khanacademy.org/science/biology/s-structure-of-a-cell#cytoskeleton-connections-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



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	<ul style="list-style-type: none">To describe, with the aid of photomicrographs and diagrams, the behavior of chromosomes in plant and animal cells during the mitotic cell cycle. <p><u>Transport in Mammals</u></p> <ul style="list-style-type: none">Describe the role of hemoglobin in carrying oxygen and carbon dioxide with reference to the role of carbonic anhydrase.Describe and explain the significance of the higher red blood cell count of humans at high altitudeDescribe the cardiac cycle (including blood pressure changes during systole and diastole.Explain how heart action is initiated and controlled (reference	<ul style="list-style-type: none">Diagrammatically explain the structure of heart, highlighting the differences in chambers.Using Bloom’s taxonomy to create different level questions on Transport in mammals.Using a mind map explain the working of cardiac cycle.Write a report on the structural adaptations of people living at high altitude.	<ul style="list-style-type: none">https://www.pinterest.com/pin/ARWd9Q1nOF4ReNCKu4MPLUR9ZzPNgP9tnb52RIk03tfaHAIPiXOc3ws/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-104902581http://www.nuffieldfoundation.org/practical-biology/investigating-mitosis-allium-root-tip-squashhttps://alevelnotes.com/notes/biology/exchange-and-transport/transport-in-animalshttps://alevelnotes.com/notes/biology/exchange-
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	should be made to the sinoatrial node, the atrioventricular node and the Purkyne tissue)		and-transport/transport-in-animals <ul style="list-style-type: none">• https://alevelnotes.com/notes/biology/exchange-and-transport/transport-in-animals
Business Studies	Topic – Marketing Mix (Promotion and Place) To critically evaluate the methods used to measure the effectiveness of promotional spending.	Research and prepare a presentation on the promotional activities used by a firm. Select 2 large businesses in UAE and Critically evaluate their promotional strategies.	AS and A level Textbook by Peter Stimpson. https://www.tutor2u.net/business/reference/marketing-mix-promotion-revision-presentation
Chemistry	ALCOHOLS, ESTERS AND CARBOXYLIC ACIDS: <ul style="list-style-type: none">• To explain the chemistry of alcohols, exemplified by ethanol, in the following reactions: (i) combustion (ii) substitution to give halogenoalkanes	<ul style="list-style-type: none">• Create a mind map showing reactions of alcohols and also how they relate to other classes of compound already learnt.• Practice making molecular models of isomers of alcohols with 3, 4 and 5 carbon atoms.• Solve questions based on examples of primary, secondary and tertiary	https://www.chemguide.co.uk/organicprops/alcoholmenu.html https://en.wikibooks.org/wiki/Organic_Chemistry/Alcohols



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	<p>(iii) reaction with sodium (iv) oxidation to carbonyl compounds and carboxylic acids (v) dehydration to alkenes (vi) formation of esters by esterification with carboxylic acids</p> <ul style="list-style-type: none">• To explain characteristic oxidation reactions of alcohols using various oxidizing agents.• To deduce the presence of a $\text{CH}_3\text{CH}(\text{OH})-$ group in an alcohol from its reaction with alkaline aqueous iodine to form tri-iodomethane <p>CARBONYL COMPOUNDS:</p> <ul style="list-style-type: none">• To describe: (i) the formation of aldehydes and ketones from primary and secondary alcohols respectively using $\text{Cr}_2\text{O}_7^{2-}/\text{H}^+$ (ii) the reduction of aldehydes and ketones, e.g. using NaBH_4 or LiAlH_4 (iii) the reaction of aldehydes and ketones with HCN and NaCN.	<p>alcohols, to decide which can be oxidised and which cannot name a suitable oxidising agent give visible observations</p> <ul style="list-style-type: none">• state conditions and give formulae of products. construct balanced chemical equations.• Predict the alcohols from a given list, which will give positive iodoform test and to construct balanced chemical equations. <ul style="list-style-type: none">• Prepare a power point to compare and contrast the reactions of aldehydes and ketones.• Choose the compounds which give positive iodoform test, from a given list of organic substances.• Carry out analysis of aldehydes and ketones in the laboratory, using - Tollens reagent	<p>https://www.chegg.com/home/workhelp/questions-and-answers/classifyalcohols-prima</p> <p>https://www.youtube.com/watch?v=2rEBwCLogw</p> <p>http://www.a-levelchemistry.co.uk/45compounds-containing-the-carbonylgroup.html</p> <p>https://alevelchemistry.co.uk/notes/carbonyl-compounds/</p>
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	<ul style="list-style-type: none"> To describe the mechanism of the nucleophilic addition reactions of hydrogen cyanide with aldehydes and ketones 		
Computer science	<ul style="list-style-type: none"> To show how data are transferred between various components of the computer system using the address bus, data bus and control bus To determine how factors, contribute to the performance of the computer system. 	<ul style="list-style-type: none"> Create a mind map to show how data are transferred between various components of the computer system using the address bus, data bus and control bus. Compare and evaluate how factors contribute to the performance of the computer system. <ul style="list-style-type: none"> Processor type and number of cores the bus width clock speed cache memory 	https://www.bbc.co.uk/bitesize/guides
Economics	<ul style="list-style-type: none"> To discuss the causes and changes in the terms and trade. To discuss the importance of protectionism. 	Research on <ul style="list-style-type: none"> research your own or another allocated country's changes in the terms of trade over the last twenty years determine whether they have improved or deteriorated over this 	www.economicsonline.co.uk/Global_economics/Policies_to_promote_development.html www.businesseconomics.com/country-data.html



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	<ul style="list-style-type: none"> To discuss the causes of imbalances in BOP 	<p>period and whether they have been volatile or stable</p> <ul style="list-style-type: none"> assess the implications for the future development of their given economy. the impact of each method in solving (e.g.) a balance of payments deficit in their own country Research and write a report on the relative importance of the identified arguments for protectionism in relation to their own country's economy. the causes of imbalances for each component in the current account using source material from textbooks and the web links provided, making notes on the explanations they find. 	<p>https://www.tutor2u.net/economics/reference/protectionism</p> <p>http://www.economicsonline.co.uk/Global_economics/Trade_protectionism.html</p> <p>www.economicsonline.co.uk/Global_economics/The_balance_of_payments.html</p> <p>www.economicshelp.org/blog/5776/trade/uk-balance-of-payments</p> <p>www.businesseconomics.com/country-data.html</p>
<p>Pure Mathematics</p>	<p>Differentiation</p> <ul style="list-style-type: none"> To calculate the gradient at a point on a curve, given its equation To find the equations of the tangent and normal to a curve at a point. To interpret a derivative as a rate of change of one variable with respect to another. 	<ul style="list-style-type: none"> Make a list of derivatives of simple functions Research on the applications of differentiation. How do you find maximum and minimum points using differentiation? 	<p>https://www.bbc.com/bitesize/guides/zyj77ty/revision/1</p> <p>https://revisionmaths.com/advanced-level-maths-revision/pure-maths/calculus/differentiation</p> <p>https://www.britannica.com/science/analysis-mathematics/Calculus#ref731796</p>



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	<ul style="list-style-type: none">• To apply derivatives in solving real – world problems• To use second derivatives to distinguish minimum and maximum points <p>Integration:</p> <ul style="list-style-type: none">• To understand the term indefinite integral and the need to add the constant of integration.• To integrate functions which can be expressed as sums of powers of x• To evaluate a definite integral• To use definite integrals to find area under the curve• To find volume of a revolution about either X or Y axis.	<ul style="list-style-type: none">• Make notes to summarize learning that includes solved examples • Apply the basic integration rules in finding the function, given it's derivative. Can you get more than one function when you integrate? Why? Research on the significance of constant of integration. • Research on the real life applications of integration. • Make notes to summarize learning that includes solved examples.	<p>https://www.intmath.com/applications-differentiation/applications-of-differentiation-intro.php http://www.statistica.com.au/differentiation_max_and_min.html</p> <p>https://www.mathsisfun.com/calculus/integration-introduction.html</p> <p>https://www.bbc.com/bitesize/guides/zgxttfr/revision/1</p> <p>https://revisionmaths.com/advanced-level-maths-revision/pure-maths/calculus/integration</p>
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<p>Statistics</p>	<p><u>Topic: Normal Distribution and Permutation and Combinations</u></p> <ul style="list-style-type: none"> • Solve problems concerning a variable X, where $X \sim N(\mu, \sigma^2)$ • Recognise practical situations where the distribution is a suitable model. • 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 • Evaluate probabilities with the calculations using permutation and combination <p><u>Energy, Work and Power</u></p>	<ul style="list-style-type: none"> • Model a situation on normal distribution from a real-life situation. • Summarise your learning and prepare notes on normal distribution with examples. • Model a situation on permutation and combinations from real life situation. • Prepare notes on how to distinguish between permutation and combination using real life situations. <ul style="list-style-type: none"> • Make notes on cases where the motion may not be linear, e.g. a child 	<p>https://revisionmaths.com/advanced-level-maths-revision/statistics/normal-distribution</p> <p>https://revisionmaths.com/advanced-level-maths-revision/statistics/permutations-and-combinations</p> <p>https://www.youtube.com/watch?v=2tuBREK_mgE</p> <p>https://www.youtube.com/watch?v=zQAmwgZgObk</p>
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	<ul style="list-style-type: none">• analyze the concepts of gravitational potential energy and kinetic energy, and use appropriate formulae• understand and use the relationship between the change in energy of a system and the work done by the external forces, and use in appropriate cases the principle of conservation of energy• use the definition of power as the rate at which a force does work, and use the relationship between power, force and velocity for a force acting in the direction of motion	<p>on a smooth curved 'slide', where only overall energy changes need to be considered.</p> <ul style="list-style-type: none">• solve problems involving the instantaneous acceleration of a car moving on a hill against a resistance.	<p>https://www.physicsclassroom.com/calcpad/energy</p> <p>https://revisionmaths.com/advanced-level-maths-revision/mechanics/work-energy-power</p> <p>https://alevelmaths.co.uk/mechanics/work-energy-and-power/</p>
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<p>Psychology</p>	<p>Evaluate the Direct Effect approach to mass media, with particular focus upon the hypodermic syringe model?</p> <p>Case Study: Columbine Massacre</p>	<p>Case Study: Columbine Massacre www.youtube.com/watch?v=2yqe6sdAeZk (Columbine massacre) www.theguardian.com/uk/2000/apr/24/timradford (Computer games linked to violence) http://news.bbc.co.uk/1/hi/sci/tech/1295920.stm (Columbine massacre parents sue computer game makers) Note: there are numerous examples of cases where the Scream horror movies have been linked to violence. Useful websites: https://revisionworld.com/a2-level-level-revision/sociology/mass-media-0/effect-media-content-audiences-society (Explanation and evaluation of hypodermic syringe model) https://en.wikipedia.org/wiki/Hypodermic_needle_model (explanation of hypodermic syringe model) https://getrevising.co.uk/diagrams/mass_media_effect_models (mind map of media models) https://abcnews.go.com/Entertainment/films-shows-inspired-real-crimes/story?id=16836535 (real crimes inspired by film / entertainment)</p>	<p>Useful video: www.youtube.com/watch?v=Qt5MjBlvGcY (examination of the hypodermic syringe model) Extension activity: Learners to research further examples to illustrate the direct effect of violence in media and people’s behaviour</p>
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Physics	<u>Particle and Nuclear Physics</u> Atoms, Nuclei and Radiation Fundamental particles <ul style="list-style-type: none">• describe a simple quark model of hadrons in terms of up, down and strange quarks and their respective antiquarks• Understand that a hadron maybe either a baryon or a meson• describe the composition, mass and charge of α, β^- and γ-radiations	<ul style="list-style-type: none">• Research on the properties of α^-, β^- and γ-radiations• Describe β^- and β^+ decay in terms of a simple quark model• Describe changes to quark composition that take place during β^- and β^+ decay	https://www.s-cool.co.uk/a-level/physics/particle-classification-and-interactions/revise-it/the-quark-model-of-hadrons http://www.particleadventure.org/npe.html https://www.youtube.com/watch?v=edgsmtUH954
English Language	<u>WRITING IN THE STYLE OF THE AUTHOR.</u> <ul style="list-style-type: none">• To enhance critical thinking skills.• To further enhance speech writing skills.	Watch the following video and create a speech in the style of the speaker shown.	Abraham Lincoln Gettysburg speech (Jeff Daniels) - YouTube



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Art and Design	Personal Investigation in-depth study that demonstrates the candidate's ability to carry out independent research from a starting point of their choice through to a fully realised and coherent conclusion	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	Theory : <ul style="list-style-type: none">• To evaluate the different causes of digital divide between people and regions.• To discuss Master and transaction files Practical : <ul style="list-style-type: none">• To use sound and video editing tools• To use advanced spreadsheet functions• To Normalize a data base	Solve past paper questions based on the given topics . Create a mind map on ways to reduce digital divide. Compare Master and Transaction files Create a video using audacity and Movie maker	Audacity, Movie maker www.teach-ict.com