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Aim High Progress Study Programme _ (Year 12) -February _2021

Subject	Focus	Activities	Useful website
Arabic	TOPIC: التشبيه الضمني – الجناس – أفعال المقاربة والرجاء والشروع – كيف تكون شابا ناجحا وتحقق أحلامك . - المغفلة التي علمتني – نظرة – لغات العالم مرآيا الناس	- يكتب فقرة تتضمن التشبيه الضمني . - يستخدم الجناس في كتابة أمثلة . - يحدد من العناوين للصحف أفعال المقاربة والرجاء والشروع . - يكتب مقالا عن أحلامه . - يصف الشخصيات في القصة . - يحدد الهدف من القصة . - يعيد صياغة القصة . - مناقرة هل ستموت اللغة العربية أم لا .	https://www.youtube.com/watch?v=wTr-JaMpNs0 https://www.youtube.com/watch?v=FofxXOIjBU0 https://www.youtube.com/watch?v=FofxXOIjBU0
Islamic Studies (Arabs)	TOPIC: - التواصل الاجتماعي سلوك وآداب - الشيخة فاطمة بنت المبارك Learning objectives: أن يوضح أهمية التواصل بين الناس أن يبدي راية في وسائل التواصل الاجتماعي	يكلف الطالب ببعض التكاليف البيتية – يحرص على البعد عن الأضرار التي تهلك صحته – يلتزم بآداب الإسلام في التواصل الاجتماعي. يكتب بحثا عن الرعاية الصحية . يكتب بحثا عن آداب التواصل الاجتماعي . يكتب موضوعا عن أهمية التشريع في حياة الأمم. يكتب موضوعا عن آداب الإسلام في التعامل مع وسائل التواصل .	https://www.youtube.com/wat



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	<p>أن يحلل شخصي الشیخة فاطمة بنت لمبارك أن یوضح أهم أعمال الشیخة فاطمة بنت المبارک</p>	<p>یكتب تقریرا عن الشیخة فاطمة بنت المبارک .</p>	<p>https://www.youtube.com/watch?v=A0fQzYsbZ28</p>
<p>Islamic Studies Non Arabs</p>	<p>TOPIC: 1. Separation of spouses</p> <p>2. Extremism</p> <p>Learning objectives:</p> <ul style="list-style-type: none">▪ To Comprehend the significance of a balanced family system▪ To elucidate the importance of a healthy relationship with husband & wife▪ 2. To elucidate the concept of extremism and moderation▪ To explore the factors lead to extremism▪ To evaluate the effect of these traits on society	<p>Write an article that shows how important is a happy and balanced family to build a happy and balanced society.</p> <p>Think and create a video that shows how we can keep our youth stay away from extremism. How has U.A.E successfully implemented strategies against extremism? Mention in your video their efforts towards this issue.</p>	<ul style="list-style-type: none">▪ https://www.youtube.com/watch?v=YU87qBdkMVU&t=48s&ab_channel=QuranWeekly
<p>Chemistry</p>	<p>ALKANES</p> <ul style="list-style-type: none">• To understand the general unreactivity of alkanes,		



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	<p>including towards polar reagents</p> <ul style="list-style-type: none">• To describe the chemistry of alkanes as exemplified by the following reactions of ethane:• Combustion• substitution by chlorine and by bromine• To describe the mechanism of free-radical substitution at methyl groups with particular reference to the initiation, propagation and termination reactions• To explain the use of crude oil as a source of both aliphatic and aromatic hydrocarbons• To suggest how cracking can be used to obtain more useful alkanes and alkenes of lower Mr from larger hydrocarbon molecules <p><u>ALKENES:</u></p>	<p>Activity 1:</p> <ul style="list-style-type: none">• Practice writing balanced equations showing complete and incomplete oxidation.• Compare combustion of simple alkanes and higher alkanes. <p>Activity 2:</p> <ul style="list-style-type: none">• Create an animation/ plan a simulation to show how free radical substitution reaction operates in alkanes.• Activity 3: With reference to ADNOC- UAE based petroleum Industry write about every detail for fractional distillation of crude oil. Also discuss the health and safety aspects during the fractional distillation. <p>Activity 4:</p> <ul style="list-style-type: none">• Prepare an INFOGRAPHIC poster to show reactivity of alkanes	<ul style="list-style-type: none">• https://revisionworld.com/a2-level-level-revision/chemistry/organic-chemistry/alkanes <p>ONLINE QUIZ</p> <ul style="list-style-type: none">• http://en.mcqslearn.com/a-level/chemistry/alkanes-reaction-mcq.php• http://en.mcqslearn.com/a-level/chemistry/sources-of-alkanes-mcq.php• http://www.a-levelchemistry.co.uk/29-alkenes.html
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	<ul style="list-style-type: none">• To describe the chemistry of alkenes as exemplified, where relevant, by the following reactions of ethene and propene (including the Markovnikov addition of asymmetric electrophiles to alkenes using propene as an example):• addition of hydrogen, steam, hydrogen halides and halogens• oxidation by cold, dilute, acidified manganate(VII) ions to form the diol• oxidation by hot, concentrated, acidified manganate(VII) ions leading to the rupture of the carbon-carbon double bond in order to determine the position of alkene linkages in larger molecules• To describe the mechanism of electrophilic addition in alkenes,• using bromine/ethene and hydrogen bromide/propene as examples• To describe the characteristics of addition polymerisation as exemplified by poly(ethene) and PVC	<p>Activity 5:</p> <ul style="list-style-type: none">• Research about chemical properties of alkanes and prepare a poster showing the chemical reactions suitable mechanism. <p>ACTIVITY 1:</p> <ul style="list-style-type: none">• Prepare an INFOGRAPHIC poster to compare reactivity of alkanes and alkenes. <p>ACTIVITY 2:</p> <ul style="list-style-type: none">• Create a concept map to show reactions of alkenes. <p>ACTIVITY 3:</p> <ul style="list-style-type: none">• Polymers are necessary evils in today's world. Justify the statement.	<ul style="list-style-type: none">• http://www.s-cool.co.uk/a-level/chemistry/aliphatic-compounds/revise-it/alkenes• https://revisionworld.com/a2-level-level-revision/chemistry/organic-chemistry/alkenes• http://chubbyrevision.weebly.com/alkenes.html
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		ACTIVITY 4: <ul style="list-style-type: none">Practice identifying products in oxidation reactions of alkenes acidified manganate(VII) ions under dilute and cold in addition to hot and concentrated conditions.	
Biology	<u>The Cell Cycle:</u> <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.To describe, with the aid of photomicrographs and	<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.	<ul style="list-style-type: none">https://www.khanacademy.org/science/biology/structure-of-a-cell#cytoskeleton-junctions-and-extracellular-structureshttps://www.pinterest.com/pin/AWcOObfxyUDe7EbxhdRH4B4aF5ufa3ZLUXNfzkrv8OAZd6PC935YiGE/https://www.pinterest.com/pin/539306124111951378https://www.youtube.com/watch?v=pOsAbTi9tHw&feature=youtu_gdata_pla_yerhttps://www.pinterest.com/pin/ARWd9Q1nOF4ReNCKu4MPLUR9ZzPNgP9tnb52Rlk03tfaHAPIXOc3ws/



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	<p>diagrams, the behavior of chromosomes in plant and animal cells during the mitotic cell cycle.</p>	<ul style="list-style-type: none"> To prepare microscopic slides using onion root tip squash to observe the different mitotic stages 	<ul style="list-style-type: none"> 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
<p>Physics</p>	<p><u>Waves</u></p> <ul style="list-style-type: none"> To know the experimental arrangement of Young's double slit experiment. To show an understanding of experiments that demonstrate stationary waves in air columns. <p><u>Deformation of Solids</u></p> <ul style="list-style-type: none"> To appreciate that deformation is caused by a force and that, in one dimension, the deformation can be tensile or compressive 	<ul style="list-style-type: none"> In Young double-slit experiment, state the effect of <ul style="list-style-type: none"> -Using slits of narrower width (but the same separation) -Using slits with smaller separation but of same width. Research on why holes are kept at different positions in a flute. Differentiate between tensile and compressive deformation. Analyse the concept of stress and strain and how it determines 	<ul style="list-style-type: none"> http://www.physicsclassroom.com/class/light/Lesson-3/Young-s-Experiment http://www.physicsclassroom.com/class/waves/Lesson-4/Formation-of-Standing-Waves www.cie.org.uk



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	<ul style="list-style-type: none"> To define and use the terms stress, strain and the Young modulus 	<p>the Young's modulus of different materials.</p> <ul style="list-style-type: none"> Distinguish between elastic and plastic deformation of a material Deduce the strain energy in a deformed material from the area under the force-extension graph 	<ul style="list-style-type: none"> https://study.com/academy/lesson/tensile-and-compressive-stress-and-strain-equations.html https://www.britannica.com/science/Youngs-modulus
Business Studies	<p>The Marketing Mix:</p> <ul style="list-style-type: none"> To understand and analyze different pricing methods and techniques and evaluate their relevance in different business situations <p>To understand and evaluate the importance of pricing decisions to a successful marketing mix.</p>	<p>1 Why is it important that the product and price decisions are integrated, i.e. that they give a consistent image of the product? Explain your answer by referring to at least one product example.</p> <p>2 Explain one business situation in which contribution cost pricing would seem to be more appropriate than full-cost pricing.</p> <p>3. Explain why airlines use dynamic/discrimination pricing, especially when selling tickets to online customers.</p> <p>4. Explain, using business examples, the</p>	<p>www.bized.co.uk</p> <p>www.tutor2u.net</p> <p>www.s-cool.co.uk</p> <p>www.businesscasestudies.co.uk</p> <p>www.dineshbakshi.com</p> <p>Text Books/journals</p>



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		<p>difference between a skimming pricing strategy and a penetration pricing strategy.</p> <p>5. Explain an example of when a business is likely to gain from using a loss-leader strategy towards pricing.</p>	
<p>Accounting</p>	<ul style="list-style-type: none"> • To analyse the structure of limited companies and the sources of raising capital. • To apply costing concepts to make business decisions and recommendations. • Assess the need and benefits of a budgetary control system to an organization <p>Discuss the behavioral aspects of budgeting</p>	<ul style="list-style-type: none"> • Prepare a sway presentation analyzing the structure of limited companies which should include the following – • 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. <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Prepare a Ted Ed Flipped Lesson on the topic. <p>Practice questions from past paper from the year 2015</p>	<p>www.myaccountinglab.com, 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>



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<p>Economics</p>	<p>Research –oriented activity</p>	<ul style="list-style-type: none"> • Research on the topic “Terms of Trade” and investigate on the shifting terms of trade for the developing vs developed countries. • Based on the article on the Threat of a Eurozone Recession <p>Discuss the implications for the future of the Euro-Zone area.</p>	<p>www.project.syndicate.com www.tutor2u.com www.s-cool.com</p> <p>https://www.project-syndicate.org/commentary/eurozone-slowdown-policy-response-structural-reforms-by-lucrezia-reichlin-2019-01</p>
<p>Pure mathematics</p>	<p><u>Differentiation</u></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. • To apply derivatives in solving real – world problems • To use second derivatives to distinguish minimum and maximum points <p><u>Integration:</u></p>	<p>Make a list of derivatives of simple functions</p> <p>Research on the applications of differentiation.</p> <p>How do you find maximum and minimum points using differentiation?</p> <p>Make notes to summarize learning that includes solved examples</p> <p>Apply the basic integration rules in finding the function, given it's</p>	<p>https://www.bbc.com/bitesize/guides/zvj77ty/revision/1 https://revisionmaths.com/advanced-level-maths-revision/pure-maths/calculus/differentiation https://www.britannica.com/science/analysis-mathematics/Calculus#ref731796 https://www.intmath.com/applications-differentiation/applications-of-differentiation-intro.php http://www.statistica.com.au/differentiation-max-and-min.html</p>



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	<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. <p><u>Statistics 1</u></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, 	<p>derivative. Can you get more than one function when you integrate? Why? Research on the significance of constant of integration.</p> <p>Research on the real-life applications of integration.</p> <p>Make notes to summarize learning that includes solved examples.</p> <p>Model a situation on normal distribution from a real-life situation.</p> <p>Summarise your learning and prepare notes on normal distribution with examples.</p> <p>Model a situation on permutation and combinations from real life situation.</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> <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=2tuBREKmgE</p>
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	<p>and solve simple problems involving selections</p> <ul style="list-style-type: none">• 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>Mechanics 1</u> <u>Energy, Work and Power</u></p> <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	<p>Prepare notes on how to distinguish between permutation and combination using real life situations.</p> <p>Make notes on cases where the motion may not be linear, e.g. a child on a smooth curved 'slide', where only overall energy changes need to be considered.</p>	<p>https://www.youtube.com/watch?v=zQAmwgZgObk</p> <p>https://www.physicsclassroom.com/calcpad/energy</p> <p>https://revisionmaths.com/advanced-level-maths-revision/mechanics/work-energy-power</p>
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	<ul style="list-style-type: none">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	solve problems involving the instantaneous acceleration of a car moving on a hill against a resistance.	https://alevelmaths.co.uk/mechanics/work-energy-and-power/
Psychology	Research Methods To compare and evaluate the different experimental designs used in psychological studies	Research on different experimental designs used in psychological studies. Refer to different studies that you have done and describe the experimental designs used by the psychologists. Create a power point or an excel sheet to describe your findings with the evaluation.	www.holah.co.uk www.tes.co.uk
Sociology	The process of learning and socialisation To examine the importance of socialisation with respect to Feral Children	Suggest ways that feral children can be used to test the influence of nature or nurture on human behaviour. Create a power-point to showcase your ideas.	www.sociology.org www.tes.co.uk



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English Language	Discursive/ Argumentative writing	Research and discuss on topics. a few examples are: Is a lottery a good idea? Do curfews keep teens out of trouble? Are law enforcement cameras an invasion of privacy? Are we too dependent on computers? Then give yourself 1 hour to write on the topic	http://learn.lexiconic.net/essayspers.htm
Art and Design	AO2, AO3 and AO4	Communication: purposeful trials of art works to communicate, develop and present from the inception to the critically analysed works. The need to understand the relationship about the work which is developed, influenced by chosen media and methods.	www.studentartguide.com
Information Technology	Theory: 1. The digital divide	Activities: Students to create presentations on Digital Divide and Expert systems.	Text book https://www.cambridgeinternational.o



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	<ul style="list-style-type: none"> • Factors that contribute towards widening the digital divide gap • Impact on society <p>2. Expert systems 3. Data processing systems</p> <p>Practical:</p> <ul style="list-style-type: none"> • Database concepts • Import tables into database • Queries and Reports' • Grouped Reports • Normalization concepts • Dynamic and Static Queries <ul style="list-style-type: none"> • Spreadsheets Vlookup, Hookup functions. • Multiple if statements • Left, Right, Concatenate • Pivot tables • Data filtering and sorting <p>Sound and video editing</p>	<p>Students to work on advanced Database and spreadsheet concepts, Sound and video editing</p> <p>Past paper Practise.</p>	<p>rg/programmes-and-qualifications/cambridge-international-as-and-a-level-information-technology-9626/</p>
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	Edit audio and video clips using vide and audio editing software		
Travel and Tourism	To demonstrate the ways in which organisations can assess the effectiveness of the customer service provided to customers.	<ol style="list-style-type: none"> 1. Give two examples of complaints that a visitors to a tourist attraction might make. 2. Collect the examples of social media used to gather informal feedback. 	www.wto.org Text book & other sources
Computer Science	<p>Pre-release material: Students will use the following concept to solve the pre-release material June 2020.</p> <ul style="list-style-type: none"> • To use a 'count controlled' loop: <ul style="list-style-type: none"> - given pseudocode will use the following structure: FOR <identifier> ← <value1> TO <value2> <statement(s)> ENDFOR - alternatively: FOR <identifier> ← <value1> TO <value2> STEP <value3> <statement(s)> 	<p>Encourage your child to develop a software project to include the following using the scenario from pre-release material June 2020: For example, if the chosen programming language is Python, give a program written in Java. Ask learners to translate the program in the chosen programming language. The result should be tested to see if it produces the correct output.</p>	<p>Commenting programs: http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem_Solving,_Programming,_Data_Representation_and_Practical_Exercise/Fundamentals_of_Programming/Comments</p> <p>Inputs and outputs in programming: http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem_Solving,_Programming,_Data_Representation_and_Practical_Exercise/Fundamentals_of_Programming/Input_and_output</p> <p>Operators:</p>



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	<p>ENDFOR</p> <ul style="list-style-type: none">• to use a 'post-condition' loop: - given pseudocode will use the following structure:		<p>http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem Solving, Programming, Data Representation and Practical Exercise/Fundamentals of Programming</p>
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