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Aim High Progress Study Programme _ (Year 12) –October _2022

	<p>* أن يشرح الآية مستخدماً التشبيه التمثيلي .</p> <p>TOPIC</p> <p>* تعبير وصفي .</p>	<p>* يكتب موضوعاً وصفيًا عن حفلة موسيقية .</p>	<p>https://www.youtube.com/watch?v=fv-ELHrLH-c</p>
Islamic Studies Arabs	<p>1. الفراق بين الزوجين</p> <p>يبين أنواع الفراق بين الزوجين</p> <p>2. رسول الله والحياة الاجتماعية</p> <p>يدل من سيرة الرسول على الحرص في بناء مجتمع متماسك</p> <p>3. حديث الأفك عظة وعبرة</p> <p>يستنتج الأحكام الواردة في الآيات</p>	<p>يوضح تأثير فراق الزوجين على كل منهما وعلى الأبناء</p> <p>يعدد سبل تقوية العلاقات الاجتماعية</p> <p>يبين الآثار السلبية للشائعات على الفرد والمجتمع</p>	<p>https://www.youtube.com/watch?v=VCHlq8MO-f-U</p> <p>https://www.youtube.com/watch?v=142OWu9NSEg</p> <p>https://www.youtube.com/watch?v=7bFaviweVno</p>
Islamic Studies Non Arabs	<p>TOPIC: FINANCIAL CONTRACTS IN ISLAM</p>	<p>RECORD A VIDEO ON THE IMPORTANCE OF MAKING CONTRACTS ACCORDING TO ISLAMIC RULING AND MENTION THE WISDOM BEHIND .</p>	



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	<p>Learning objectives:</p> <p>To learn about the concept of financial system in Islam.</p> <ul style="list-style-type: none">- To comprehend the significance of regulating contracts <p>To analyse the types of contracts in Islam</p> <p>TOPIC: FINANCIAL CONTRACTS IN ISLAM (2)</p> <p>Learning objectives:</p> <ul style="list-style-type: none">- To elucidate the mutual consent in making a contract-To analyze the consequences of violating the contract.	<p>THINK AND CREATE A VIDEO THAT SHOWS HOW WE CAN KEEP OUR YOUTH STAY AWAY FROM CHEATING IN CONTRACTS IF WE DEAL WITH SOMEONE ACCORDING TO ISLAMIC RULING.</p>	<p>https://www.youtube.com/watch?v=coDFN155vmI</p>
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Biology	<p>1. Biological molecules</p> <ul style="list-style-type: none">Justify the Structure of carbohydrates, proteins and Lipids and signify their roles In living organisms.Enlight the importance of Hydrogen bond in the formation of Biological molecules.Explore the unique properties of water to enable it to serve as universal solvent in cells. <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	<ul style="list-style-type: none">https://www.pinterest.com/pin/177962622753078984/https://jameskennedymonash.wordpress.com/2015/03/09/foldable-biomolecules/https://www.pinterest.com/pin/460563499374249978/Survey the bio fortified food with the types of biomolecules in the foods sold in UAEEvaluate whether the little brown grains of yeast obtained from the grocery store are alive by testing for metabolism and growth.https://mrsmillersblog.wordpress.com/as-biology/http://www.cheme.cornell.edu/research/area.cfm?area=187http://www.omicsgroup.org/journals/biomolecular-research-therapeutics.phpMaking a 3D and 2D structure of biomolecules for better understanding.Create a TED-Ed lesson or video on enzymes and their functions	<p>https://youtu.be/dMPfSl60iJo http://www.particlesciences.com/news/technical-briefs/2009/protein-structure.html https://alevelnotes.com/Protein-Structure/61 http://www.vivo.colostate.edu/hbooks/genetics/biotech/basics/prostruct.html</p> <p>https://revisionworld.com/gcse-revision/biology/cell-activity/proteins-and-amino-acids/globular-and-fibrous-proteins https://youtu.be/rYrtuTa6bTg</p> <p>http://www.markedbyteachers.com/as-and-a-level/science/biological-importance-of-water.html https://youtu.be/FziG5LgrXPo</p>
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	<p>activation energy and enzyme specificity.</p> <ul style="list-style-type: none">• Explain the effects of reversible inhibitors, both competitive and non-competitive, on the rate of enzyme activity.• 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	<ul style="list-style-type: none">• Create questions on padlet for your peer on mode of action of enzymes• Create a Kahoot quiz on the topic enzymes.• Interpret different graphs on enzyme affinity.	<p>https://youtu.be/mfC9RB7IL9A https://youtu.be/QU0VBcHnQOk http://www.cpalms.org/Public/PreviewResourceUpload/Preview/38326</p> <p>http://www.rpi.edu/dept/bcbp/molbiochem/MBWeb/mb1/part2/sugar.htm has a comprehensive review of carbohydrate structure including examples of polysaccharides http://www.calfnotes.com/pdffiles/CN102.pdf</p> <p>https://alevelnotes.com/Lipids/58 http://study.com/academy/lesson/structure-and-function-of-lipids.html http://biology4alevel.blogspot.ae/2014/08/10-lipids.html https://youtu.be/VGHD9e3yRIU</p>
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Business Studies	<p>Enterprise The nature of business activity and the role of the entrepreneur</p> <p>Operations planning –Methods of Production. To analyse factors of production As challenges for new businesses. To analyse reasons of selecting method of production for a manufacturing business.</p>	<ul style="list-style-type: none">• Write a comprehensive report on factors of production and major challenges faced by new businesses.• Visit to nearest manufacturing unit and research about their method of production. Analyse your findings and give reasons for selecting that business and develop a report on their production method also include photographs of business assembly line.	<p>www.tutor2u.net</p> <p>www.dineshbakshi.com</p> <p>www.cie.org.uk</p>
Chemistry	<p>Chemical Bonding</p> <ul style="list-style-type: none">• Describe the different types of bonding based using 'dot and cross' diagram• Explain the shapes of, and bond angles in molecules using electron-pair repulsion theory• Describe covalent bonding in terms of orbital overlap including the concept of hybridisation• Explain the term bond energy, bond length, and bond polarity	<p>Activity:</p> <ul style="list-style-type: none">• Practice drawing dot-and-cross diagrams for ionic compounds as well as covalent compounds• Make a power-point presentation to explain VSEPR theory as well as σ and π bonds• List at least 10 molecules with their shapes and bond angles• Research on hydrogen bonding as well as metallic bonding• Solve past paper questions based on identifying the coordinate covalent	<p>http://www.chemistryrules.me.uk/found/found3.htm</p> <p>http://www.inchm.bris.ac.uk/schools/vsepr/</p> <p>https://chem.libretexts.org/Core/Physical_and_Theoretical_Chemistry/Physical_Properties_of_Matter/Atomic_and_Molecular_Properties/Intermolecular_Forces/Specific_Interactions/Hydrogen_Bonding</p> <p>http://learn.mindset.co.za/sites/default/files/resource/lib/emshare-show-note-asset/3723_fdoc.pdf</p> <p>http://www.chemguide.co.uk/physical/ktmenu.html</p>



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	<ul style="list-style-type: none">Describe intermolecular forces based on permanent and induced dipoles, hydrogen bonding and metallic bonding <p>States of Matter</p> <ul style="list-style-type: none">State the basic assumptions of the kinetic theory as applied to ideal gasesState and use the general gas equation $pV = nRT$ in calculationsDescribe the lattice structures of crystalline solids including ionic, simple molecular, giant molecular	<p>bonding, shapes of molecules, bonding and physical properties.</p> <p>Activity:</p> <ul style="list-style-type: none">Design a quiz using Kahoot based on kinetic theory as applied to gases (to include – conditions necessary for gas to approach ideal behaviour and limitations of ideality)Practice calculations based on ideal gas equationsDraw a flow chart to show the lattice structure of crystalline solids and describe their properties based on it.	<p>http://ww2.chemistry.gatech.edu/class/peek/1310/notes/09-gases.pdf</p> <p>https://www.creative-chemistry.org.uk/molecules/structures.htm</p>
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Computer science	Hardware: <ul style="list-style-type: none">• Explain the difference between primary and secondary storage.• Identify items that are stored in secondary storage.• Explain the difference(s) between RAM and ROM.• Explain the difference(s) between SRAM and DRAM.• Explain the difference(s) between PROM, EPROM and EEPROM.• Describe the principal operations of a range of hardware devices.• Explain the purpose and use of buffers in a range of devices.• Describe the use of sensors.• Identify appropriate sensors for a scenario.• Explain the difference between a monitoring and control system.	Encourage your child to create presentation on the following: Ask child to research examples of devices that make use of PROM, EPROM and/or EEPROM, what they are used for in these situations and why. Child should maintain a glossary of hardware component terminology.	http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem Solving, Programming, Data Representation and Practical Exercise/Fundamentals of Programming/Input and output
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	<ul style="list-style-type: none"> • Describe the use and function of a monitoring and control system in a given situation. • Use the NOT, AND, OR, NAND, NOR and XOR logic gate symbols • Understand and define the functions of : <ul style="list-style-type: none"> • NOT, AND, OR, NAND, NOR and XOR (EOR) gates • Construct the truth table for each of the logic gates a logic expression 		
Economics	<ul style="list-style-type: none"> • Discuss how estimates of XED and YED have implications for decisions that have to be made by firms. • Discuss how estimates of XED and YED have implications for decisions that have to be made by firms. • Discuss how estimates of PED have implications for decisions that have to be made by firms. • Analyse how a shift of the demand curve occurs when 	<p>Consolidate learning on demand and supply by selecting questions or part-questions from Cambridge past papers</p> <p>Students come up with practical ways in which understanding of price elasticity coefficients could be applied of useful applications of this understanding, for example, the type of good that a government wishing to raise tax revenue, is likely to tax.</p> <p>Class discussion on how the amount people spend changes (or doesn't) when their income changes.</p>	<p>www.tutor2u.net/blog/index.php/economics/comments/unit-1-micro-key-diagrams-and-glossary</p> <p>www.tutor2u.net/economics/revision-notes/as-markets-crossprice-elasticity-of-demand.html</p> <p>www.economicsonline.co.uk/Competitive_markets/Income_elasticity_of_demand.html</p> <p>www.economicsonline.co.uk/Competitive_markets/Elasticity.htm</p> <p>www.tutor2u.net/economics/revision-notes/as-markets-demand.html</p> <p>www.tutor2u.net/economics/revision-notes/as-markets-supply.html</p> <p>www.tutor2u.net/economics/revision-notes/as-markets-demand.html</p>



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	<p>there is a change in any of the non-price factors that determine demand.</p> <ul style="list-style-type: none">• Analyse the AD and AS model	<p>calculate income elasticities of demand for a suitable range of normal, luxury and inferior goods.</p> <p>calculate values of cross-elasticity associated with complementary and substitute goods. Include questions that check learners' understanding of the relationship between the value of cross-elasticity coefficients and complementary and substitute goods.</p> <ul style="list-style-type: none">• construct a diagram of the circular flow of income between firms and households for both types of closed economy• then construct an equivalent diagram for an open economy• think of actual examples from their own or another given economy of all six injections/ <p>Students analyse how the consumer and producer surplus will change in different situation.</p> <p>Students consider how production potential can be increased.</p> <p>Using worksheet with various scenarios of changes in the determinants of AD and AS. Learners draw diagrams to show changes and comment on the effect on the level of output, the price level and employment.</p>	
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<p>Mathematics Edexcel</p>	<p><u>Pure Mathematics 1</u> 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 it's inverse Understand and use transformations of the graph of $y = f(x)$ <p>Coordinate geometry:</p> <ul style="list-style-type: none"> To find the length between two points. To find the gradient of a line. To find the midpoint , given two points. To find the equation of a line if two points are given or a point and a gradient is given. <p><u>Statistics 1</u></p> <p><u>Probability, Permutations and combinations</u></p>	<p><u>Pure Mathematics</u></p> <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><u>Statistics</u> What is Bayer's theorem ?How does this related with conditional probability Model a situation on conditional probability from a real life situation.</p> <p><u>Mechanics</u></p> <p>Find situations which can be modeled as motion in a straight line with constant acceleration Record your journey from Dubai to Abudhabi and draw a speed time graph representing the journey and calculate average speed from the graph</p>	<p>https://www.intmath.com/functions-and-graphs/2a-domain-and-range.php https://mathbitsnotebook.com/Algebra1/Functions/FNDomainRange.html https://www.bbc.co.uk/bitesize/guides/z3brdmn/revision/4 https://www.onlinemathlearning.com/function-transformation-hsf-bf3.html https://revisionmaths.com/advanced-level-maths-revision/pure-maths/geometry/coordinate-geometry https://revisionmaths.com/advanced-level-maths-revision/pure-maths/geometry/equation-circle</p> <p><u>Statistics</u></p> <p>https://revisionmaths.com/advanced-level-maths-revision/statistics/permutations-and-combinations https://revisionmaths.com/advanced-level-maths-revision/statistics/probability https://www.youtube.com/watch?v=wTlbovKpTME</p> <p><u>Mechanics</u></p>
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	<ul style="list-style-type: none">• Solve problems involving permutation and combinations of a set of objects• Evaluate probability in simple cases• Apply sample space to evaluate the probability.• Add and multiply probability in appropriate cases.• Apply Venn diagrams and tree diagrams to calculate the probability.• Show that events are mutually exclusive or independent.• Able to calculate conditional probability using formula.• Model situations involving probability. <p><u>Mechanics 1 :</u> <u>Chap 1 : Velocity and acceleration</u></p> <ul style="list-style-type: none">• To work with scalar and vector quantities for distance and speed• To use equations of constant acceleration• To sketch and read displacement–time graphs and velocity–time graphs• To solve problems with multiple stages of motion.		<p>http://fhsmaths.weebly.com/kinematics-of-a-particlea-straight-line.html</p> <p>http://www.mathsbox.org.uk/revisionnotes/AQ%20Mechanics%20%20Revision%20Notes.pdf</p>
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Psychology	Biological approach	<p>Assess the cognitive approach in psychological studies?</p> <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>AS /A level Psychology textbook or any other General Psychology textbooks. You may refer to the below links for additional information.</p> <p>https://www.verywellmind.com/what-is-the-biological-perspective-2794878</p>
Physics	<p><u>Dynamics</u></p> <ul style="list-style-type: none">• To state and apply each of Newton’s laws of motion.• To describe qualitatively the motion of bodies falling in a	<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	<p>https://www.physicsclassroom.com/class/newtlaws/Lesson-1/Newton-s-First-Law</p>



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	<p>uniform gravitational field with air resistance</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 <p><u>Projectile motion</u></p> <ul style="list-style-type: none"> To describe and explain motion due to a uniform velocity in one direction and a uniform acceleration in a perpendicular direction 	<p>momentum to explain why the first ball cannot travel in its initial direction after the collision. Illustrate your answer with a diagram</p> <ul style="list-style-type: none"> Practice numerical problems applying the conservation of momentum principle. To derive equations for Range and maximum height for a projectile 	<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> <p>https://www.physicsclassroom.com/Class/vectors/u3l2a.cfm</p> <p>https://www.physicsclassroom.com/class/vector/Lesson-2/Horizontally-Launched-Projectiles-Problem-Solving</p>
<p>English Language</p>	<p>Analysing the style of a writer</p>	<p>Research on any extract from a short story of any genre and identify the common themes, motifs, style of writing, figurative devices etc. employed by the writer(s).</p>	<p>https://americanliterature.com/author/kate-chopin/short-story/the-story-of-an-hour</p> <p>https://americanliterature.com/high-school-short-stories</p>



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		Attempt a short story of 200-300 words with a similar theme, motifs and style that you have researched on	
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
Applied ICT	Theory Hardware and software: <ul style="list-style-type: none">• Mainframe computers and supercomputers• Types of hardware and software• User interface• Operating systems Practical Spreadsheets Database	Encourage your child to create a presentation on the following: Operating systems, Types of software, User interface. Attempt past paper questions and create presentations on the given topics	Past papers, Internet www.teach-ict.com



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