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Subject	Focus	Activities	Useful website
Arabic	* ما سبق دراسته من المرفوعات والمنصوبات والمجرورات والمشتقات والتشبيه بأنواعه والاستعارة والطباق والمقابلة * آيات من سورة النور (قرآن كريم) * مراجعة نحو (اسم الفاعل – اسم المفعول – صيغ المبالغة) * الله ولي الذين آمنوا) قرآن كريم(* نظرة خارج النافذة. * كان وأخواتها	- تقسيم الطلاب إلى مجموعات وإعطاء كل مجموعة مهمة (قطعة نحو مشتملة على أعرب و استخرج وصغ نشاط إبداعي : يقوم الطلاب بكتابة موضوعات إبداعية مستخدمين فيها ما سبق دراسته من النحو والبلاغة يقوم الطلاب بعمل خرائط ذهنية لبعض الدروس - تقسيم الطلاب إلى مجموعات وإعطاء كل مجموعة مهمة (قطعة نحو مشتملة على أعرب و استخرج وصغ نشاط إبداعي : يقوم الطلاب بكتابة موضوعات إبداعية مستخدمين فيها اسم الفاعل – اسم المفعول – صيغ المبالغة يقوم الطلاب بعمل خرائط ذهنية لبعض الدروس نشاط إبداعي استقصى بعيدا عن النص وذلك عن طريق أسئلة التفكير الناقد - نشاط التحدى عن طريق المقارنة بين الآيات وآيات أخرى.	http://www.drmosad.com/index76.htm https://www.youtube.com/watch?v=Q5aW-xYdCTE https://www.youtube.com/watch?v=6ix2WHRT-tI https://www.youtube.com/watch?v=fv-ELHrLH-c http://www.qyias.com/quizzes/2016/265 http://www.almaany.com/ar/dict/ar-ar/

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		8- الربط بين الدرس والثقافة الإماراتية والحياة العملية - عمل حوار بين الطلاب حول القيم الواردة فى النص	
Islamic Studies (Arabs) **Islam**	وقاية المجتمع من الجرائم التطرف	يكتب بحثا عن خطورة الفواحش على الفرد والمجتمع يكتب بحثا عن التطرف وآثاره على الفرد والمجتمع يحرص على حفظ سورة النور	https://www.youtube.com/watch?v=TCEOUhCKyac https://www.youtube.com/watch?v=pFIFEEDHiiY
Islamic Studies **Non Arabs**	Protecting society against moral crimes SEPARATION OF SPOUSES:	• Write down a journal on how social media can be used to spread awareness about moral crimes. • Write an article that shows how important a happy and balanced family to build a happy and balanced society.	https://www.youtube.com/watch?v=GFWhQ6lGMTU https://www.youtube.com/watch?v=YU87qBdkMVU&t=4s
Chemistry	**Moles and Equations**	• Practice writing definitions of RAM, relative isotopic mass, relative	https://www.chemguideforcie.co.uk/section1/learninga.html

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	• To define the relative atomic, isotopic, molecular and formula masses and moles. • To analyse mass spectra in terms of isotopic abundances and molecular fragments • To define empirical and molecular formula and calculate the same using RAM. • To use mole concepts in calculating reacting masses, volumes of gases and concentration of solution **Atomic Structure:** • To describe the structure of an atom • To recall the relative mass and relative charge of protons, neutrons and electrons • To calculate the subatomic particles of an atom/ion **Electrons in atoms:**	molecular mass, empirical formula, moles • Research – (a)'why ^{12}C was chosen as the standard' (b) 'how Avogadro determined the value of his constant' • Use the concept of moles in calculating reacting masses, volumes of gases and concentration of solutions using questions from past papers. • Practice calculating relative atomic mass using the data obtained from mass spectrometer. • Find the concentration of NaCl in intravenous saline, glucose in isotonic sports drinks and other similar calculations for everyday solutions. • Investigate the use of mass spectroscopy in drug testing athletes • Prepare a TED-Ed lesson on 'how the model of the atom changed over time' • Prepare a table on the properties of subatomic particles • Solve past paper questions based on the calculation of subatomic particles • Prepare an infographic poster on the shapes of orbitals	https://alevelchemistry.co.uk/notes/relative-atomic-mass-relative-molecular-mass-mass-spectrometry/ http://www.docbrown.info/page04/4_73calcs11msc.htm https://study.com/academy/lesson/calculating-percent-composition-and-determining-empirical-formulas.html http://www.a-levelchemistry.co.uk/11-atomic-structure.html https://www.s-cool.co.uk/a-level/chemistry/atomic-structure/revise-it/the-structure-of-the-atom https://www.chemguide.co.uk/atoms/properties/gcse.html https://alevelchemistry.co.uk/notes/electron-configurations/ https://www.chemguide.co.uk/atoms/properties/ies.html https://revisionworld.com/a2-level-level-revision/chemistry/atomic-structure-bonding-periodicity/ionisation-energy http://www.docbrown.info/page07/ASA2ptable2a.htm

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	• To describe the number and relative energies of the s, p and d orbitals for the principal quantum numbers 1, 2 and 3 and also the 4s and 4p orbitals • To describe and sketch the shapes of s and p orbitals • Describe I.E, factors affecting I. E, predicting group or period or an element from successive ionisation energy data **<u>Chemical Bonding</u>** • 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 • Describe intermolecular forces based on permanent and induced	• Practice writing electronic configuration of elements with atomic number 1 to 36 • Make a Power-Point presentation on ionisation energy and the various factors affecting it • Plot the ionisation energies of elements with atomic number 1 to 36 on a graph and then explain trends • 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 bonding, shapes of molecules, bonding and physical properties	https://www.chemguide.co.uk/atoms/bondingmenu.html https://alevelchemistry.co.uk/notes/chemical-bonding/ http://www.physicsandmathstutor.com/chemistry-revision/a-level-edexcel/topic-2/ http://www.chembook.co.uk/chap4.htm

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	dipoles, hydrogen bonding and metallic bonding		
Biology	**Cell Structure** • To compare the structure of typical animal and plant cells by making temporary preparations of living material and using photomicrographs. • To calculate the linear magnifications of drawings, photomicrographs and electron micrographs. • To explain and distinguish between resolution and magnification, with reference to light microscopy and electron microscopy. • To describe and interpret electron micrographs and drawings of typical animal and plant cells as seen with the electron microscope. • To recognize, compare and contrast the structure of typical prokaryotic cells with typical eukaryotic cells	• Diagrammatically explain the working of light and electron mircroscope. • Compare the photomicrographs of plant and animal cells. • Create models of each organelle to emphasise on the significance of each of them. • Discuss why viruses are considered neither living nor non-living. • Using Bloom's taxonomy to create different level questions on cell structure. • Write and connect all the important scientific terms. • Interpret the photomicrographs of different types of cells.	https://www.slideshare.net/armsisb/part-2-as-level-biology-revision-note-12-cell-structures https://www.khanacademy.org/science/biology/structure-of-a-cell https://www.youtube.com/watch?v=BG-G6nRIpcw https://www.youtube.com/watch?v=CqIux4fqrEw https://www.youtube.com/watch?v=L3jeSyvPc6M

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	• To outline the key features of viruses as non-cellular structures (limited to protein coat and DNA/RNA) Enzymes: • 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 competitive and non-competitive, on the rate of enzyme activity. To compare the maximum rate of reaction (Vmax) and the enzyme affinity of different enzymes for their substrates using the Michaelis-Menten constant (Km).	• Create a TED-Ed lesson or video on enzymes and their functions • 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.	• https://edublogs.org/ • http://www.biology.arizona.edu/cell_bio/tutorials/cells/cells2.html • https://study.com/academy/lesson/types-of-microscopes-election-light-fluorescence.html • http://www.ivyroses.com/Biology/Cells/Plant-Cell-Structure.php • https://www.biologyisfun.com/cell-biology/worksheets/taboo-game-biology.pdf (exemplar) • http://www.cpalms.org/Public/PreviewResourceUpload/Preview/38326

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Physics	<u>Physical Quantities and Units</u> • To understand products or at all physical quantities consist of numerical magnitude and a unit • To express the derived units as a products or quotients of the base units and use these units as appropriate. • To show an understanding of the distinction between precision and accuracy To add and subtract coplanar vectors. represent a vector as two perpendicular components	Revise the questions given in the worksheet Use base units to check the whether the following equations are balanced. • Pressure = depth x density x gravitational field strength • Energy = mass (speed of light)^2 Revise the rule of significant figures. Precision of instrument • idea of precision of instruments • record as e.g. 14.2 cm 0.2 cm Accuracy of readings Re-visit of recording of readings in previous experiments Calculation of percentage error idea of a resultant of two vectors use of vector triangle Experiment: 'verify' use of vector triangle Discussion: examples of use of triangle - scale drawing - sketch and calculation	www.cie.org.uk www.islandphysics.com http://www.physicsandmathstutor.com/physics-revision/ www.cie.org.uk www.islandphysics.com http://www.physicsandmathstutor.com/physics-revision/ https://docbrown.info/ephysics/forces3.htm

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		Discussion of vector subtraction Discussion: Single vector as two perpendicular Components using sin θ and cos θ.	
Business Studies	Business and its environment To develop understanding of the nature of business activity. To assess the role of an entrepreneur.	• Prepare a Prezi for the class and explain why legal structures of businesses differ. • Draw a self-assessment checklist of the qualities of an entrepreneur. • Make a poster to compare your qualities with the checklist and share your findings in class Conduct a survey of businesses in your local area finding examples of businesses from each of the economic sectors and with differing legal structures. Collate the survey results	www.bized.co.uk www.tutor2u.net Interviews and Local newspapers and magazines.

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Accounting	• To understand the accounting rules which are applied in the preparation of accounting statements.	Research, identify and show the application of the following accounting principles with relevant examples – This could be presented either as notes or as Sway/Prezi. • business entity • historic cost • money measurement • going concern • consistency • prudence • realisation • duality (double-entry) • materiality • matching • substance over form. On completion, prepare a quiz to consolidate learning of these accounting concepts. Follow this up with a class discussion on the need for and purpose of these accounting principles.	www.accounting-simplified.com/financial-accounting/accounting-concepts-and-principles/ www.dineshbakshi.com www.cie.org.uk www.sway.com

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Economics	Basic Economic Ideas and Resource Allocation To illustrate the significance of scarcity and choice in decision making To evaluate resource allocation in different economic systems and issues of transition	**LEARNING MENU FOR YEAR 12 ECONOMICS** **Due date : 10th September 2019** Governments in every country in the world need to take important economic decisions in terms of how they allocate scarce resources. A government will have a certain amount of money to spend on a variety of different areas and these could include education, health care, police, defence and national security, transport and infrastructure. For example, the UK Government has decided to spend a great deal of money on the building of a new, high speed rail service between London and Birmingham. This will substantially reduce the journey time between these two cities, but there is an opportunity cost involved. Now complete **any two** of the following tasks:	www.bized.co.uk www.tutor2u.net www.s cool www.projectsyndicate

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		1.Appetizer (Everyone Shares) (10 marks) • Explain the relevance of scarcity, choice and resource allocation from the point of view of governments . Use examples to illustrate your points. **2.Entree (Select One) (20 marks)** • Present innovative ideas for a green, eco - friendly and sustainable environment. • Create an artistic view of what the High speed rail link would look like • Create a financial plan for the revenue and expenditure for implementing the rail link **3. Side Dishes (Select at Least Two) (30 marks)**	

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		• Create a Ted Ed Lesson on the features, advantages and disadvantages of Mixed economies using real world examples • Critically evaluate the strengths and weaknesses of Planned Economies using a Near Pod Lesson. • Create a Sway presentation on Transition Economies to highlight the steps involved and the problems faced by transition economies. **4.Dessert (Optional) (30 marks)** • Explain in a documentary presentation convincing stakeholder on how different sustainable energy resources can be used to run the high speed rail link between London and Birmingham	

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Pure mathematics	**Pure Mathematics** **Coordinate geometry:** • Find equation of a straight line,given sufficient information. • Interpret and use any of the forms y=mx+c, y-y1=m(x-x1), ax+by+c=0 in solving problems. • Use algebraic methods to solve problems involving lines and circles **Quadratics:** • Express and use quadratic polynomial in completed square form. • Find and use the discriminant of a quadratic polynomial. • Solve quadratic equations and inequalities in one unknown. • Solve linear and a quadratic simultaneous equations. • Recognise and solve equations in x that are quadratic in some function of x. **Statistics 1 –** **Chapter 1 : Representation of Data :** • To display numerical data in stem-and-leaf • diagrams, histograms and cumulative frequency graphs	Summarise your learning on coordinate geometry in the form of notes, formulae, examples, flash cards etc. Research and summarise findings with examples on real life application of the Quadratics. Analyse how we can apply the number lines rather than a quadratic curve to solve quadratic inequality. In magazines and newspapers you frequently come across data representations in a variety of forms.	https://revisionmaths.com/advanced-level-maths-revision/pure-maths/geometry/coordinate-geometry https://studywell.com/maths/pure-maths/coordinate-geometry/the-equation-of-a-circle/ https://www.youtube.com/watch?v=-1m15Tevf9o https://revisionmaths.com/advanced-level-maths-revision/pure-maths/algebra/quadratic-equations https://www.youtube.com/watch?v=ai8HSroCBD0 https://www.youtube.com/watch?v=-1m15Tevf9o

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	• To interpret statistical data presented in • various forms • To select an appropriate method for displaying data. **Mechanics 1 :** **Chapter 1 : Velocity and acceleration** • 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.	You are to ask yourself questions such as: How was the data collected? Does the representation give a fair picture of the data? Are the data reliable? What purpose do the presenters of the data have? Identify discrete and continuous data. 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.	https://www.toppr.com/guides/physics/motion/equations-of-motion/#:~:text=In%20case%20of%20uniform%20acceleration,)%20and%20acceleration(a).&text=The%20three%20equations%20are%2C,v%20%3D%20u%20%2B%20at https://physics.info/motion-equations/
Psychology	To investigate the experimental methods in Psychology	Watch you tube documentaries on Milgram, Zimbardo and Skinner. Based on your observations now research on how to conduct experimentation in psychology. Prepare a presentation on "How to conduct an experiment in Psychology". It can be a presentation of your choice - prezi, power point presentation or a poster.	Websites - http://psychology.about.com http://www.psychtronics.com http://www.cliffsnotes.com/ http://list25.com/25-intriguing-psychology-experiments/ http://www.simplypsychology.org/experimental-method.html

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Geography	To analyse the structure of the Earth	Research and analyse the internal structure of the Earth including the characteristics of the core, mantle, asthenosphere and the difference between oceanic and continental crust. Use various resources available to you to create a presentation showing how the nature of the earth's structure influences plate tectonics.	www.geographylwc.org.uk www.geographypages.com www.geographygeek.co.u www.revisionworld.co.uk/level/geography www.s-cool.co.uk http://www.gatm.org.uk/
Sociology	To examine the different research methods used in Sociology	Watch the Youtube clips on Research Methods, Observation, Experiments, Longitudinal Studies and Case Studies, Content Analysis and the stages of Research design, Theory and Methods, Methodological Pluralism and Methodological Purism, The Study of Society, Sociology and the Social Sciences and Sociology and the Social Policy Part 1 Watch TV interviews and report back on what makes them effective and what is not helpful?	www.youtube.com www.sociology.org.uk http://www.cliffsnotes.com/

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		Find 2 newspaper stories from the following options: Sarah Payne, Children sold in 7 Days, Bombings, War or Drug Trafficking. Create macro research presentation.	
English Language	• To be introduced to the syllabus and expectations of English Language. • To develop an understanding on analysis of language and content in texts.	• Read the syllabus to be thorough with the contents and criteria. • Read through various texts from resources such as speeches, diaries, biographies, articles, blogs etc and comment on the language applied as well and analyse to provide your own point of view.	http://www.cie.org.uk/images/128605-2015-syllabus.pdf
Art and Design	Investigation and curiosity to developing innovative practices (AO1 and AO2).	To be inquisitive, this is important in terms of experimentation and exploring materials and processes.	www.studentartguide.com
Information Technology	• To evaluate the difference between a flat file, and a relational and hierarchical databases. • To describe the components of a data dictionary	• To create a presentation on different types of files that can be used and how a management information can be used.	https://www.cambridgeinternational.org/search/gcsearch.aspx?q=past%20papers

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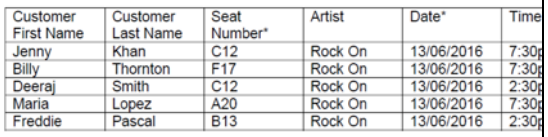
	• To describe the characteristics of data in unnormalised form, first normal form and third normal form.	• To explain why the following database is not in second normal form.  Customer First Name / Customer Last Name / Seat Number* / Artist / Date* / Time Jenny / Khan / C12 / Rock On / 13/06/2016 / 7:30p Billy / Thornton / F17 / Rock On / 13/06/2016 / 7:30p Deeraj / Smith / C12 / Rock On / 13/06/2016 / 2:30p Maria / Lopez / A20 / Rock On / 13/06/2016 / 7:30p Freddie / Pascal / B13 / Rock On / 13/06/2016 / 2:30p	
Global Perspectives	To create a research proposal for your research essay	You will research the topic Gender issues. Use various internet sources to research the topic. You also watch relevant documentaries. • Write a research question. • Identify and write two contrasting perspectives about this issue. • Identify and evaluate the usefulness of at least 5 different sources that you believe may help you write a research essay of 2000 words. Task: Create a presentation of your choice eg. Google slides to show your	Reliable souces chosen by the student other than Wikipedia

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		research proposal from the above points.	
History	To analyse the impact of imperialism on 20th century History	Watch the videos from given links or any other relevant source and create your report/podcast/presentation/mindmap on *Why was imperialism a significant force for late nineteenth century Europe?*	https://www.youtube.com/watch?v=7di4zMGlZY8 https://www.youtube.com/watch?v=XXjWfBSX6uk https://www.youtube.com/watch?v=alJaltUmrGo
Travel and Tourism	Importance of Tourist Information Centers (T I C)	To analyse the features that make a destination popular visitor are likely to visit the local Tourist Information Centre. Discuss the ways in which the TIC is able to provide a service for such visitors.	www.developtourism.com www.tourismleafletonline.com www.iceplc.com www.cie.org.uk www.dineshbakshi.com www.bized.co.uk

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Computer Science	**Information representation:** Convert a number from one base to another. Perform binary additional and subtraction. Explain the purpose and benefits of different number bases. Explain the use of character sets in computer systems. Use ASCII, extended ASCII and Unicode to represent textual data. Explain how a bitmap image is represented and stored on a computer. Explain how a vector graphic is represented and stored on a computer. Explain whether a bitmap image of vector graphic is more appropriate for a given task. Explain how an analogue sound wave is digitised.	Encourage your child to develop a software project to include the following: A python program to take input as any binary number and convert into denary and hexadecimal number system and vice versa. A python program to take input as any 8 bit binary and find the 2's complement form of the given byte.	http://courses.cs.vt.edu/~csonline/NumberSystems/Lessons/DecimalToBinaryConversion/index.htm http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem_Solving,_Programming,_Data_Representation_and_Practical_Exercise/Fundamentals_of_Data_Representation/Binary_number_system www.python.org.

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	Explain the effect of changing the sample rate and resolution on a sound wave. Explain the need for compression. Explain the difference between lossy and lossless compression. Recommend lossy or lossless compression for a given scenario and justify the choice. Show how a sound/image/text can be compressed using run-length encoding.		