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Aim High Progress Study Programme _ (Year 12) –September _2024

Subject	Focus	Activities	Useful website
Accounting	<ul style="list-style-type: none"> To comprehend the accounting rules which are applied in the preparation of accounting statements. To differentiate between managerial accounting and financial accounting. 	<p>Research, identify and show the application of the following accounting principles with relevant examples –</p> <p>This could be presented either as notes or as Sway presentation.</p> <ul style="list-style-type: none"> business entity historic cost money measurement going concern consistency prudence realisation duality (double-entry) materiality matching substance over form. <p>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.</p> <ul style="list-style-type: none"> Research and present a Sway presentation showing differentiation 	<p>www.accounting-simplified.com/financial-accounting/accounting-concepts-and-principles/</p> <p>www.dineshbakshi.com</p> <p>www.cie.org.uk</p> <p>www.sway.com</p>



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	To list the elements and uses of managerial accounting.	between managerial accounting and financial accounting and also list the elements of managerial accounting. Identify the areas in accounting where the elements of managerial accounting is applied and show the purpose of dividing accounting into managerial and financial accounting. Present your findings in a word document with suitable examples.	www.accounting-simplified.com/financial-accounting/accounting-concepts-and-principles/ www.dineshbakshi.com www.cie.org.uk www.sway.com
Arabic (Arabs)	TOPIC: مراجعة التشبيه التام * مراجعة قواعد النحو السابقة (الجملة * (..... الأسمية والفعلية – الصفة – الحال) Learning objectives: أن يميز الظواهر النحوية والصرفية أن يربط بين خبراته السابقة *	يكتب فقرات باستخدام الجمل الاسمية والفعلية* يشرح الآية مستخدماً التشبيه التمثيلي * يميز الظواهر النحوية والصرفية يكتب فقرات باستخدام التشبيه التام *	https://www.mooneyes.org/t25754-topic https://madrassa.org/categories/arabic



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<p>Islamic Studies Arabs</p>	<p>TOPIC: وقاية المجتمع - مناهج المفسرين - الإسلام ينبذ العنف</p> <p>Learning objectives:</p> <p>أن يبين المعنى الإجمالي للآيات من سورة النور أن يبين الآثار المترتبة على الزنا أن يوضح المقصود بمناهج المفسرين أن يميز بين مناهج التفسير المختلفة أن يشرح موقف الإسلام من التطرف أن يستنتج الحكمة من تحريم التطرف</p>	<p>أن يبين القيم الواردة في الآيات أن يستنتج الحكمة من تشريع اللعان</p> <p>أن يحدد التفسير المناسب وفقاً لموضوع البحث أن يبين فوائد تنوع التفاسير</p> <p>أن يستنتج أسباب التطرف أن يبرهن على رفض الإسلام للتطرف</p>	<p>https://www.youtube.com/watch?v=pFIFEEDHiiY</p> <p>https://www.youtube.com/watch?v=x0hq7fkF5jU</p> <p>https://www.youtube.com/watch?v=3VT5cNW RqI8</p>
<p>Islamic Studies Non Arabs</p>	<p>TOPIC: PROTECTING SOCIETY AGAINST MORAL CRIMES</p> <p>Learning objectives:</p> <p>-To elucidate the concept of adultery as mentioned in Quran.</p>	<p>WRITE AN ARTICLE ON THE PUNISHMENT COMPARISON OF THE OF ADULTERY WITH OTHER RELIGIONS AND HOW WOULD YOU DEFEND ISLAMIC PUNISHMENT REGARDING THIS MATTER</p>	<p>https://www.islamreligion.com/articles/1943/morality-and-ethics-in-islam</p> <p>https://islamicmarkets.com/education/five-main-contracts-in-islamic-finance</p>



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	<p>-To evaluate the consequences of adultery on individual and society.</p> <p>TOPIC: FINANCIAL CONTRACTS IN ISLAM.</p> <p>Learning objectives:</p> <p>-To elucidate the concept of Riba in Islam</p> <p>▫- To analyze the consequences of Riba on an individual & society</p>	<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>Biology</p>	<p>Cell Structure</p> <ol style="list-style-type: none"> 1. To review the principles of microscopy with reference to light and electron microscopes. 2. To calculate the linear magnifications of drawings, photomicrographs and electron micrographs 3. To distinguish between resolution and magnification, with reference 	<ol style="list-style-type: none"> 1 Create 30 Kahoot questions on Cell structure and its organelles. 2 Identifying tissues and drawing low power plan diagrams of TS of a leaf, stem or root can make a good introduction to the use of a microscope. 3 This can lead to the calculation of magnification of drawings made from microscope slides. 	<ul style="list-style-type: none"> • Bio Factsheet 75: Microscopes and their uses in Biology. http://www.rothamsted.bbsrc.ac.uk/notebook/index.html • http://www.biochem4schools.org/results_topic.htm?qry=cell_biology • http://publications.nigms.nih.gov/insidethecell/chapter1.html



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	<p>to light microscopy and electron microscopy</p> <ol style="list-style-type: none">To calculate actual sizes of specimens from drawings, photomicrographs and electron micrographsTo analyse detailed structure of typical animal and plant cells, as seen under the electron microscope and Outline functions of organelles in plant and animal cells.To differentiate features of prokaryotic and eukaryotic cells. <p>Cell membranes and transport</p> <ul style="list-style-type: none">To describe and explain the fluid mosaic model of membrane structure, including an outline of the roles of phospholipids, cholesterol, glycolipids, proteins and glycoproteins.To outline the process of cell signaling involving the release of chemicals that combine with cell surface receptors on target cells, leading to specific responses.	<p>4 Students should progress to drawing individual cells under high power</p> <ul style="list-style-type: none">Create/Draw a model of fluid mosaic membraneStudents will demonstrate the movement of substances in and out of the cellResearch the effect of various drugs on the cellular membrane and its working.Investigate the movement of substances in various solutions <ul style="list-style-type: none">Survey the bio fortified food with the types of biomolecules in the foods sold in UAE	<ul style="list-style-type: none">http://www.cellsalive.com/cells/cell_model.htmhttp://learn.genetics.utah.edu/content/begin/cells/insideacell/ http://www.ellenjmchenry.com/downloads/Cells_Activities_Chapters1and2.pdfhttps://www.teachengineering.org/activities/view/van_membrane_activity3http://www.amybrownscience.com/2011/09/free-osmosisdifusion-lab.htmlhttps://www.pinterest.com/pin/410742428488301074https://www.ukessays.com/essays/biology/practical-investigation-on-osmosis-biology-essay.php
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	<ul style="list-style-type: none">• To describe and demonstrate the Movement of substances into and out of cells.• Investigating the effect of increasing the size of model cells and understanding of the constraints of obtaining resources across the cell surface and moving substances out of cells <p>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.	<ul style="list-style-type: none">• Evaluate 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/• For students interested in research and further studies• Making a 3D and 2D structure of biomolecules for better understanding.• question 3,7,8 & 9 from the course book	<ul style="list-style-type: none">• http://brilliantbiologystudent.weebly.com/osmosis.html <p>http://www.rpi.edu/dept/bcbp/molbiochem/MBWeb/mb1/part2/sugar.htm has a comprehensive review of carbohydrate structure including examples of polysaccharides</p> <p>http://www.calfnotes.com/pdf/files/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> <p>http://www.markedbyteachers.com/as-and-a-level/science/biological-importance-of-water.html https://youtu.be/FziG5LgrXPo</p> <p>https://youtu.be/mfC9RB7IL9A https://youtu.be/QU0VBcHnQOk</p>
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<p>Business Studies</p>	<p>Topic: Enterprise To analyse the significance of creating value and evaluate the ways of enhancing added value.</p>	<p>Explain the concept of 'creating/adding value' by introducing the idea of 'selling for a higher price than the cost of bought-in materials'.</p> <p>Select 2 contrasting businesses and analyse how each business could 'create more value' and present your idea in the form of a Report.</p>	<p>www.bized.co.uk www.tutor2u.net https://www.tutor2u.net/blog/index.php/business-studies/comments/adding-value-creative-uses-of-a-aluminium-tray Newspapers and Magazines Text Book</p>
<p>Chemistry</p>	<p>Moles and Equations</p> <ul style="list-style-type: none"> To define the relative atomic, isotopic, molecular and formula masses and moles. To analyze the mass spectrum of a given compound 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 <p>Atomic Structure:</p>	<ul style="list-style-type: none"> Practice writing definitions of RAM, relative isotopic mass, relative 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 	<p>https://www.chemguideforcie.co.uk/section1/learninga.html https://alevelchemistry.co.uk/notes/relative-atomic-mass-relative-molecular-mass-mass-spectrometry/ http://www.docbrown.info/page04/4_73calcs11msc.htm Finding the molecular formula from a mass spectrum - YouTube Analytical Chemistry Mass Spectrometry. - ppt video online download (slideplayer.com) Mass spectrometry menu (chemguide.co.uk) https://study.com/academy/lesson/calculating-percent-composition-and-determining-empirical-formulas.html</p>



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	<ul style="list-style-type: none">• 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 <p>Electrons in atoms:</p> <ul style="list-style-type: none">• 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 <p>Chemical Bonding</p> <ul style="list-style-type: none">• Describe the different types of bonding based using 'dot and cross' diagram	<ul style="list-style-type: none">• 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• 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 <p>Solve past paper questions based on identifying the coordinate covalent bonding, shapes of molecules, bonding and physical properties</p>	<p>http://www.a-levelchemistry.co.uk/11-atomic-structure.html</p> <p>https://www.s-cool.co.uk/a-level/chemistry/atomic-structure/revise-it/the-structure-of-the-atom</p> <p>https://www.chemguide.co.uk/atoms/properties/qcse.html</p> <p>https://alevelchemistry.co.uk/notes/electron-configurations/</p> <p>https://www.chemguide.co.uk/atoms/properties/ies.html</p> <p>https://revisionworld.com/a2-level-level-revision/chemistry/atomic-structure-bonding-periodicity/ionisation-energy</p> <p>http://www.docbrown.info/page07/ASA2ptable2a.htm</p> <p>https://www.chemguide.co.uk/atoms/bonding/menu.html</p> <p>https://alevelchemistry.co.uk/notes/chemical-bonding/</p> <p>http://www.physicsandmathstutor.com/chemistry-revision/a-level-edexcel/topic-2/</p> <p>http://www.chembook.co.uk/chap4.htm</p>
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	<ul style="list-style-type: none"> • 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 dipoles, hydrogen bonding and metallic bonding 		
<p>Economics</p>	<ul style="list-style-type: none"> • Basic economic ideas and resource allocation <p>To critically evaluate how the production possibility curve is used to show how the fundamental economic problem applies in an economy. To analyse why government find it necessary to provide some goods and services.</p> <p>To discuss the concept of economic problem in relation to the following SDG: SDG 12 – Responsible Consumption and Production SDG 1 – No Poverty</p>	<ul style="list-style-type: none"> • Produce a ‘mind map’ which illustrates the connections between the key terms Resources, Scarcity and choices and what the term ‘economics’ mean. • Discuss the factors students would consider while shopping and making decisions. • Based on what choices made recently students will explain that the choice they didn’t take is the opportunity cost of their decision. • Research on Sustainable Development Goals (SDG) to link fundamental problem of scarcity with these goals. 	<p>www.tutor2u.net/economics/revision-notes/as-markets-scarcity-and-choice.html</p> <p>https://www2.deloitte.com/ch/en/pages/consumer-business/articles/shifting-sands-sustainable-consumer.html</p> <p>https://SDG.un.org/goals</p> <p>https://youtu.be/JNwhtQS5zoQ</p> <p>https://youtu.be/1cEkgU_jKuY www.tutor2u.net/economics/reference/economic-systems</p>



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	<p>SDG 4 – Quality Education</p> <p>SDG 14 – Life Below Water</p> <p>SDG 16 – Peace, Justice and Strong Institutions</p> <p>SDG 3 – Good Health and Well-Being</p> <p>SDG 13 – Climate Action</p>	<ul style="list-style-type: none"> • Discuss Economics as a social science comparing with physical science • Students prepare different normative and positive statements using SDG. • Group discussions, positive and normative statements. • Students to link SDG with different factors of production and briefly explain how achieving one goal might help improve the quality and quantity of production factors. • Discussion on: <ol style="list-style-type: none"> 1. Which economic system is more likely to achieve SDG, e.g. Is a planned economy more likely to ensure good health and well-being of its citizens than a market economy? 2. How SDG influence what to produce, how to produce and for whom to produce. • Students use Production Possibility Curve to illustrate opportunity cost of economic growth in terms of adverse effects on the environment. • Students will link SDG with different types of goods 	<p>www.tutor2u.net/economics/reference/economic-systems-connection-wall-activity</p> <p>www.tutor2u.net/economics/revision-notes/as-markets-production-possibility-frontier.html</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> <p>https://thesustainablelivingguide.com/why-are-eco-friendly-products-expensive</p> <p>https://www.bbc.co.uk/news/business-58885545.amp</p>
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		<ul style="list-style-type: none"> • Discuss the functions necessary to successfully undertake the role of an entrepreneur. • Students to research the economic systems. Include, the key characteristics, advantages and disadvantages of each system and provide evidence to decide what kind of economic system might accurately represent their economy. • Learners illustrate using production possibility curves <ol style="list-style-type: none"> 1. increasing costs 2. constant costs 3. economic growth. • Learners with different scenarios will illustrate the shift in demand and supply curves. • Students use demand and supply diagrams to analyse effects of producing and consuming more sustainable goods. 	
Psychology	<p>Biological approach</p> <p>Assess the biological approach in psychological studies.</p>	<p>Describe and evaluate the following: -</p> <ul style="list-style-type: none"> • Key assumptions of biological approach. • Key studies under biological approach. • Issues and debates surrounding biological approach. 	<p>AS /A level Psychology textbook or any other General Psychology textbooks.</p> <p>You may refer to the below links for additional information.</p> <p>https://www.verywellmind.com/what-is-the-biological-perspective-2794878</p>



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		<ul style="list-style-type: none"> • Research method used by biological approach • Strengths and weakness of using biological approach. 	
Physics	<p>Introduction</p> <p>To understand physical quantities, consist of numerical magnitude and a unit</p> <p>To express the derived units as a products or quotients of the base units and use these units as appropriate.</p> <p>To show an understanding of the distinction between precision and accuracy</p> <p>To distinguish between scalar and vector quantities and give examples of each.</p> <p>To add and subtract coplanar vectors. represent a vector as two perpendicular components</p>	<p>Revise the questions given in the worksheet Use base units to check the whether the following equations are balanced.</p> <ul style="list-style-type: none"> • Pressure = depth x density x gravitational field strength • Energy = mass (speed of light)² <p>Revise the rule of significant figures.</p> <p>Precision of instrument</p> <ul style="list-style-type: none"> • idea of precision of instruments • record as e.g. 14.2 cm 0.2 cm <p>Accuracy of readings Re-visit of recording of readings in previous experiments Calculation of percentage error</p> <p>idea of a resultant of two vectors use of vector triangle Experiment: 'verify' use of vector triangle Discussion: examples of use of triangle</p>	<p>www.cie.org.uk www.islandphysics.com http://www.physicsandmathstutor.com/physics-revision/</p> <p>https://www.savemyexams.co.uk/notes/a-level-physics-cie-until-2021/2-measurement-techniques-pre/2-1-measurements-errors-pre/2-1-3-calculating-uncertainty-pre/</p> <p>www.cie.org.uk www.islandphysics.com</p>



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		<ul style="list-style-type: none"> - scale drawing - sketch and calculation <p>Discussion of vector subtraction Discussion: Single vector as two perpendicular Components using $\sin \theta$ and $\cos \theta$.</p>	<p>http://www.physicsandmathstutor.com/physics-revision/</p> <p>https://docbrown.info/ephysics/forces3.htm</p>
<p>Sociology</p>	<p>Introduction to Research methods</p> <ul style="list-style-type: none"> • To analyze the stages of research design, methods and methodology. 	<ul style="list-style-type: none"> • 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? 	<p>www.youtube.com</p> <p>www.sociology.org.uk</p> <p>http://www.cliffsnotes.com/</p>



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		<ul style="list-style-type: none">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	<ul style="list-style-type: none">To be introduced to the syllabus and expectations of English Language.To develop an understanding on analysis of language and content in texts.	<ul style="list-style-type: none">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.Review the learner guide to have a better understanding of the analysis and writing expectations.	<p>https://www.cambridgeinternational.org/Images/635901-2024-2026-syllabus.pdf</p> <p>https://5steps.academy/wp-content/uploads/2021/08/9093_Learner_Guide_for_examination_from_2021.pdf</p>
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	Communication: The need to understand the relationship about the chosen subject and the works that will build on critical and purposeful influences transformed into original/ influenced or manipulated outcome.	<p>www.studentartguide.com</p>



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	allow the different skills to be fully exploited critically.		
Information Technology	<p>Theory: Data Processing and information</p> <ul style="list-style-type: none"> • Differentiate between data, information and knowledge; direct and indirect data sources. • Explain the use of encryption to protect data • Factors that affect the quality of information • Importance of encryption, Advantages and disadvantages of different protocols and methods of encryption <p>Practical:</p> <ul style="list-style-type: none"> • Database concepts • Import tables into database • Queries and Reports' • Grouped Reports 	<p>Encourage your child to complete the following tasks and prepare a report or presentation based on their findings. This activity will require internet research, data analysis, and critical thinking.</p> <p>Find a real-world example of data being transformed into information and then into knowledge. This could be from any field such as healthcare, business, environmental science, etc.</p> <p>Task:</p> <p>Research: Find a real-world example of data being transformed into information and then into knowledge. This could be from any field such as healthcare, business, environmental science, etc.</p> <p>Identify Data: Describe the raw data used in the example.</p>	<p>www.teach.ict.com www.cie.org.uk</p>



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	<ul style="list-style-type: none">• Normalization concepts• Dynamic and Static Queries	<p>Transformation Process: Explain how this data was processed to become information.</p> <p>Discuss the insights or knowledge derived from this information.</p> <p>Create a report or create a 5-minute presentation summarizing your example.</p> <p>Research: Study the concepts of database normalization, including the definitions and purposes of the First Normal Form (1NF), Second Normal Form (2NF), and Third Normal Form (3NF).</p> <p>Task:</p> <p>Definitions: Define 1NF, 2NF, and 3NF in your own words.</p> <p>Purpose: Explain the purpose of normalization and its benefits in database design.</p> <p>Examples: Provide a simple example of a table that is not normalized and show the steps to bring it to 1NF, 2NF, and 3NF.</p>	
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		Create a report or create a 5-minute presentation summarizing your findings.	
Computer Science	<p>Programing concepts:</p> <ul style="list-style-type: none">• 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	<p>Encourage your child to develop a software project to include the following:</p> <p>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.</p>	<p>Commenting programs:</p> <p>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:</p> <p>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:http://en.wikibooks.org/wiki/A-level_Computing/AQA/Problem_Solving,_Programming,_Data_Representation_and_Practical_Exercise/Fundamentals_of_Programming/Arithmetic_operators</p> <p>www.pp4s.co.uk/main/tu-op-intro.html</p>



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<p>Travel and Tourism</p>	<ul style="list-style-type: none"> • To analyze the reason for people travel • To assess the benefits to destination through various tourism activities 	<ul style="list-style-type: none"> • Research a Tourism Organization determine what their reason for travel would have been and link to an area such as relaxation, fun, nature, adventure, sport, culture, etc. • Using data regarding reasons for travel into a country, learners produce factsheets for different countries to illustrate data and draw conclusions from it about the structure of tourist types within various countries and display in the classroom. 	<p>www.stb.gov.sg/content/stb/en.html</p>
<p>Statistics 1</p>	<p>Topic: Representation of data</p> <ul style="list-style-type: none"> • Differentiate different types of data and evaluate measures of central tendency. • Analyse and evaluate mean, variance and standard deviation of given data set. • Construct and use stem and leaf diagram and box and whisker plots to evaluate central tendency and spread. • Draw and interpret histograms and cumulative frequency for grouped data. 	<p>Compare and contrast histograms and cumulative frequency diagrams.</p> <p>Summarise your learning on representation of data and present your work in the form of notes including formulae, examples.</p> <p>Research and present your work on application of measures of central tendency and variation in real life.</p>	<p>https://statisticsbyjim.com/basics/measures-central-tendency-mean-median-mode/</p> <p>https://www.khanacademy.org/math/statistics-probability/summarizing-quantitative-data/variance-standard-deviation-population/v/range-variance-and-standard-deviation-as-measures-of-dispersion</p>



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	<ul style="list-style-type: none"> Evaluate mean and variance using coded data. Solve application problems on representation of data. 		
<p>Mathematics</p>	<p>Pure Mathematics 1</p> <p>Quadratics</p> <ul style="list-style-type: none"> Apply completing the square to find vertex of a quadratic equation. Apply discriminant to find the number of roots of a quadratic equation. Solve quadratic equations. Solve linear and quadratic inequalities. Solve by substitution a pair of simultaneous equations one linear and the other quadratic <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. 	<p><u>UM Proving the Quadratic formula</u></p> <p><u>Completing the square activity</u></p> <p>Modelling <u>UM Two Points on the Axis</u> Geogebra required for this task.</p> <p>Find midpoint, length and gradient of the line joining them using required formulae. <u>UM: Can we find the coordinates of this tilted rectangle?</u></p> <p><u>Risp 9: A circle property</u></p>	<p><u>UM Proving the Quadratic formula</u></p> <p><u>UM - Quadratic Solving Sorter</u></p> <p><u>UM Discriminating</u></p> <p><u>Quadratics in disguise</u></p> <p><u>UM Parabolic Mirrors</u></p> <p><u>UM: Teddy Bear</u> or simpler matching activity</p>



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	<ul style="list-style-type: none">• To find the equation of a line if two points are given or a point and a gradient is given.• Apply algebraic methods to solve problems involving lines and circles.• Determine the equation of a circle given its radius and center or given equation in a different form.• Solve problems involving straight lines and circles <p>Circular Measure</p> <ul style="list-style-type: none">• Define radian, and use the relationship between radians and degrees.• Use the formulae for Area and length of sector in solving problems concerning the arc length and sector area of a circle.	<p>Apply formulae for area and length of sector to solve problems.</p>	<p>https://alevelmaths.co.uk/pure-maths/geometry/circular-measure/</p> <p>https://pastpapers.co/cie/A-Level/Mathematics-9709/Topical%20Past%20Papers/Maths%209709%20Paper%201%20-%20Circular%20Measure.pdf</p>
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