



# The Winchester School



## Aim High Progress Study Programme \_ (Year 13) – November 2025

Subject	Focus	Activities	Useful website
Accounting	<ul style="list-style-type: none"><li>To control costs and evaluate performance by comparing actual expenses against predetermined standard costs for materials, labor, and overheads.</li><li>To develop independent problem-solving skills on standard costing</li></ul>	<ul style="list-style-type: none"><li>Calculate and analyze cost variances by comparing actual costs with standard costs for materials and labor, then identify favorable or adverse variances and explain possible reasons.</li><li>Revise all the topics covered so far in the A level syllabus.</li><li>Revise the topic of budgeting and practice questions on the same.</li><li>Practice question from past paper 2016 – 2024 (Feb/March and May/June series)</li></ul>	<p><a href="http://www.myaccountinglab.com">www.myaccountinglab.com</a>,</p> <p><a href="http://www.bized.co.uk">www.bized.co.uk</a></p> <p><a href="http://www.tutor2u.net">www.tutor2u.net</a></p> <p><a href="http://www.cie.org.uk">www.cie.org.uk</a>,</p>
Arabic	<ul style="list-style-type: none"><li>قصة قصيرة: علامة تعجب</li><li>تحليل القصة فنيًا وأدبيًا</li><li>تتبع الصراع وخط الأحداث</li><li>وصف الشخصيات داخليًا وخارجيًا</li><li>نص شعري: البركة</li><li>تحليل العاطفة في الأبيات</li><li>تحليل مظاهر البلاغة</li><li>الدلالة على فكرة النص</li><li>نص معلوماتي: أنسنة المدن</li><li>تحليل المعلومات الواردة</li><li>إضافة أدلة جديدة</li><li>نقد الأدلة التي ساقها الكاتب</li></ul>	<ul style="list-style-type: none"><li>يحلل القصة إلى عناصرها الفنية</li><li>يدلل على تقنيات الكتابة في القصة</li><li>يتتبع تطور الحكمة منذ بداية الأحداث</li><li>يحلل عاطفة الشاعر في الأبيات</li><li>يعدد مظاهر الوصف في القصيدة</li><li>يقارن بين نص شعري للوصف لشاعر آخر</li><li>يعدد المعلومات الواردة في النص</li><li>يدلل على رأي الكاتب من النص</li><li>ينقد الأدلة التي ساقها الكاتب</li><li>يضيف أدلة جديدة لفكرة النص</li><li>يحلل سمات النص الإقناعي</li><li>يكتب نصًا إقناعيًا حول ظاهرة اجتماعية</li></ul>	<p><a href="https://seraj-uae.com/file/2672/">https://seraj-uae.com/file/2672/</a></p> <p><a href="https://seraj-uae.com/file/841/">https://seraj-uae.com/file/841/</a></p> <p><a href="https://www.uae-study.com/file/57859/#google_vignette">https://www.uae-study.com/file/57859/#google_vignette</a></p> <p><a href="https://www.youtube.com/watch?v=X3l8EExwNe0&amp;t=1s">https://www.youtube.com/watch?v=X3l8EExwNe0&amp;t=1s</a></p>



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	<ul style="list-style-type: none"><li>• كتابة: كتابة نص إقناعي</li><li>• تحليل سمات النص الإقناعي</li><li>• قراءة نص إقناعي كمثال</li><li>• كتابة نص إقناعي حول ظاهرة</li></ul>		
<b>Islamic for Arabs</b>	<p>المسئولية في الإسلام</p> <ol style="list-style-type: none"><li>1. التمييز بين المسئولية الفردية والجماعية.</li><li>2. تحديد مجالات المسئولية الفردية.</li><li>3. تحديد نظرة الإسلام للمسئولية والإنسان.</li></ol> <p>مقاصد التشريع الخمسة-2</p> <ol style="list-style-type: none"><li>1. توضيح مفهوم علم مقاصد الشريعة وفائدته.</li><li>2. تحديد علاقة المقاصد والضروريات بغيرها.</li><li>3. استنتاج وسائل حفظ مقاصد التشريع الخمسة.</li></ol>	<p>نشاط 1 فردي: حفظ النفس من المسئوليات الفردية. علل تحريم الإسلام للإنتحار؛ مدعمًا إجابتك بالدليل.</p> <p>نشاط 2 جماعي: حدد دور أفراد الأسرة لتحقيق الغاية التي أنشئت من أجلها.</p> <p>نشاط 1 فردي: حدد الغاية من خلق الإنسان من خلال تتبع بعض الآيات القرآنية.</p> <p>نشاط 2 جماعي: ابحث عن مقاصد التشريع الخمسة التي تقوم عليها حياة الإنسان ثم اكتبها في دفترك.</p>	<p><a href="https://ifar.journals.ekb.eg/article_265128_7c714fdff2a9176cdfa4cdfe10fc4762.pdf">https://ifar.journals.ekb.eg/article_265128_7c714fdff2a9176cdfa4cdfe10fc4762.pdf</a></p> <p><a href="https://2u.pw/vYjvrOje">https://2u.pw/vYjvrOje</a></p> <p><a href="http://www.tafsir.app">www.tafsir.app</a></p>
<b>Islamic for non-Arabs</b>	<p>THE SLANDER AGAINST AYESHA (RA) and moral lessons</p> <ul style="list-style-type: none"><li>• To elucidate the importance of staying away from slandering.</li><li>• To evaluate the benefits of staying away from slandering.</li></ul>	<p>WRITE AN ESSAY ON THE IMPORTANCE OF THE WISDOM BEHIND THE PUNISHMENT OF MORAL CRIMES AS MENTIONED IN QURAN.ADD IN YOUR ESSAY HOW CAN THESE PUNISHMENTS SAVE A SOCIETY TO BECOME RUIN.</p>	<p><a href="https://islamqa.info/en/answers/108955/punishment-for-slander-in-islam#related_answers">https://islamqa.info/en/answers/108955/punishment-for-slander-in-islam#related_answers</a></p>



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<b>Art and Design</b>	Personal Investigation: the importance of intention, research, realisation and reflection to the artistic process.	In-depth study that demonstrates the candidate's ability to carry out independent research from a starting point of their choice through to a fully realised and coherent conclusion.	<a href="http://www.studentartguide.com">www.studentartguide.com</a>
<b>Business</b>	To evaluate the development of marketing strategies that are focused towards achieving specific marketing objectives	Task - Evaluate the suitable marketing strategies for the success of the business. Students choose a real company campaign (e.g., Nike's "Just Do It," Apple's product launch strategies, Spotify's personalised ads). Students are required to prepare a report which includes: <ul style="list-style-type: none"> <li>• The marketing objective behind the campaign</li> <li>• The marketing strategy used</li> <li>• Whether or not the strategy was successful and why</li> </ul>	<a href="http://www.bized.co.uk">www.bized.co.uk</a>  <a href="http://www.tutor2u.net">www.tutor2u.net</a>
<b>Biology</b>	<b>Inherited Changes</b> <ul style="list-style-type: none"> <li>• Solve Problems using genetic diagrams involving test crosses, dihybrid cross, X linked inheritance.</li> <li>• Use the chi-squared test to test the significance of differences between observed and expected results (the</li> </ul>	<ul style="list-style-type: none"> <li>• Draw annotated diagrams, using colors or shading, to show how two adjacent cells (haploid number 2) can produce 4 genetically different gametes by independent assortment.</li> </ul>	<a href="http://www.contexo.info/DNA_Basics/Meiosis.htm">http://www.contexo.info/DNA_Basics/Meiosis.htm</a>  <a href="http://higher.ed.mcgrawhill.com/sites/0072495855/student_vie">http://higher.ed.mcgrawhill.com/sites/0072495855/student_vie</a>



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	<p>formula for the chi-squared test will be provided) (see Mathematical requirements)</p> <ul style="list-style-type: none"> <li>• To Outline causes and effects of various types of Mutation</li> <li>• To explore gene control in Prokaryotes and prokaryotes</li> </ul>	<ul style="list-style-type: none"> <li>• Create Models using different recyclable material to consolidate learning of:             <ul style="list-style-type: none"> <li>(i) independent assortment and crossing. (ii) Types of mutation. (iii) Gene regulation in prokaryotes and eukaryotes.</li> </ul> </li> </ul>	<p><a href="http://w0.chapter28/animation_how_meiosis_works.html">w0/chapter28/animation_how_meiosis_works.html</a></p>
<p><b>Economics</b></p>	<p>Understand how exchange rates are measured, determined, and adjusted under different systems, including fixed, managed, and floating regimes.</p> <p>analyse how changes in exchange rates affect a country's external balance using the Marshall–Lerner condition and the J-curve effect.</p>	<ul style="list-style-type: none"> <li>• Calculate the real exchange rate and trade-weighted exchange rate using data on nominal exchange rates, inflation rates, and trade weights.</li> <li>• Graphically represent how exchange rates are determined under fixed and floating systems, and illustrate the effects of a revaluation and devaluation.</li> <li>• Analyse the impact of a currency depreciation on the current account by applying the Marshall–Lerner condition and illustrating the J-curve.</li> </ul>	<p><a href="https://www.tutor2u.net/economics/reference/fixed-floating-and-managed-exchange-rates">https://www.tutor2u.net/economics/reference/fixed-floating-and-managed-exchange-rates</a></p> <p><a href="https://www.tutor2u.net/economics/reference/the-marshall-lerner-condition-and-the-j-curve-effect">https://www.tutor2u.net/economics/reference/the-marshall-lerner-condition-and-the-j-curve-effect</a></p> <p><a href="https://tradingeconomics.com/country-list/exchange-rate">https://tradingeconomics.com/country-list/exchange-rate</a></p>



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		<ul style="list-style-type: none"><li>• Research a real-world case study to evaluate how a country's exchange rate policy has influenced its exports, inflation, and balance of payments over time.</li></ul>	
English Language	Analyse how language has changed over time.	<ul style="list-style-type: none"><li>• Take an extract from Hard Times written by Charles Dickens.</li><li>• Analyse the graphology, grammar, semantics and lexis in the given extract.</li><li>• Also compare all three with modern language and evaluate how language has changed.</li></ul>	teachingenglish.org.uk/sites/teaching/files/Dickens_Hard_Times_extract.pdf
Chemistry	<p><b><u>Analytical Techniques</u></b> To explain and use the terms Rf value in thin layer chromatography and retention time in gas/liquid chromatography from chromatograms.</p> <ul style="list-style-type: none"><li>• To interpret gas/liquid chromatograms in terms of the percentage composition of a mixture.</li></ul>	<ul style="list-style-type: none"><li>• Using Mind maps prepare a summary of various reactions of each type of functional group.</li><li>• Separation of the specific amino acids from a given mixture of them.</li><li>• Calculate the areas of the triangular peaks to estimate the proportion of components in the mixture</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://alevelchem.com/aqa_a_level_chemistry/unit3.4/s3411/05.htm">http://alevelchem.com/aqa_a_level_chemistry/unit3.4/s3411/05.htm</a></li><li>• <a href="http://www.docbrown.info/page04/4_71atomMSintro.htm">http://www.docbrown.info/page04/4_71atomMSintro.htm</a></li><li>• <a href="http://alevelchem.com/">http://alevelchem.com/</a></li></ul>



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	<ul style="list-style-type: none"><li>• To analyze the H-NMR spectrum of simple molecule in High as well as low resolution.</li><li>• To analyze a carbon-13 NMR spectrum of a simple molecule to deduce:<ul style="list-style-type: none"><li>(i) the different environments of the carbon atoms present</li><li>(ii) the possible structures for the molecule</li><li>(iii) the different types of proton present using chemical shift values</li><li>(iv) the relative numbers of each type of proton present from relative peak areas</li></ul></li></ul> <p><b><u>Chemical Energetics (Entropy &amp; Gibbs Free Energy)</u></b></p> <ul style="list-style-type: none"><li>• To predict and justify the sign of entropy changes</li><li>• To measure the entropy changes for a reaction using the standard entropy values</li><li>• To suggest the feasibility of a reaction using Gibbs free energy</li></ul>	<ul style="list-style-type: none"><li>• Practice analysing the NMR spectra of various molecules.</li><li>• Work out the sub-atomic particles present in a deuterium atom.</li><li>• Interpret the splitting pattern of D2O.</li><li>• Visit to see an NMR spectrometer in action and observe what sort of spectra it produces.</li></ul> <ul style="list-style-type: none"><li>• Compare the entropy changes for various states of matter to justify the relationship between entropy and the number of microstates</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://www.rsc.org/learn-chemistry">http://www.rsc.org/learn-chemistry</a></li><li>• <a href="http://www.s-cool.co.uk">www.s-cool.co.uk</a></li><li>• <a href="http://www.teachable.net">www.teachable.net</a></li><li>• <a href="http://www.rsc.org/education">http://www.rsc.org/education</a></li><li>• <a href="http://www.rsc.org/learnchemistry/">http://www.rsc.org/learnchemistry/</a></li><li>• <a href="http://www.rsc.org/learnchemistry/">http://www.rsc.org/learnchemistry/</a></li><li>• <a href="http://www.teachable.net">www.teachable.net</a></li></ul> <p><a href="http://study.com/academy/lesson/the-relationship-between-enthalpy-h-free-energy-g-and-entropy-s.html">http://study.com/academy/lesson/the-relationship-between-enthalpy-h-free-energy-g-and-entropy-s.html</a></p>
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	<ul style="list-style-type: none"><li>To explain the effect of temperature on the spontaneity of a reaction</li></ul> <p><b><u>Electrochemistry:</u></b></p> <ul style="list-style-type: none"><li>To determine the mathematical relationship <math>F = Le</math> and use it in calculations</li><li>To outline the working of Standard Hydrogen Electrode (SHE)</li><li>To summarise the methods used to measure the standard electrode potentials of:<ul style="list-style-type: none"><li>-metals or non-metals in contact with their ions in aqueous solution</li></ul></li><li>To apply the Nernst equation to predict quantitatively how the value of an electrode potential varies with the concentration of the aqueous ion.</li><li>To outline the direction of redox reaction using the electrochemical cell value</li><li>To understand and use the equation</li></ul>	<ul style="list-style-type: none"><li>Prepare a power-point presentation on the significance of Gibbs free energy</li><li>Calculate entropy changes using standard entropy values and relate Gibbs free energy to entropy and enthalpy</li><li>Research and write an article on the effect of temperature on feasibility of a reaction.</li></ul> <ul style="list-style-type: none"><li>Solve at least five questions making use of <math>F = Le</math> to predict the identity of the products formed during electrolysis</li><li>Construct electrochemical cell using Standard Hydrogen Electrode as one of the half cell</li><li>Research and prepare a write-up on determining the feasibility of a reaction based upon the electrochemical cell value</li><li>Plan an investigation to be conducted in a school laboratory to determine</li></ul>	<p><a href="https://chemed.chem.purdue.edu/genchem/topicreview/bp/ch21/gibbs.php">https://chemed.chem.purdue.edu/genchem/topicreview/bp/ch21/gibbs.php</a></p> <p><a href="https://byjus.com/questions/how-is-gibbs-free-energy-related-to-enthalpy-and-entropy/">https://byjus.com/questions/how-is-gibbs-free-energy-related-to-enthalpy-and-entropy/</a></p> <p><a href="https://www.chemguide.co.uk/inorganic/electrolysis/basiccalcs.html">https://www.chemguide.co.uk/inorganic/electrolysis/basiccalcs.html</a></p> <p><a href="https://byjus.com/chemistry/standard-hydrogen-electrode/">https://byjus.com/chemistry/standard-hydrogen-electrode/</a></p> <p><a href="http://www.dynamicscience.com.au/tester/solutions1/chemistry/redox/electrochemicalcellfromequan.htm">http://www.dynamicscience.com.au/tester/solutions1/chemistry/redox/electrochemicalcellfromequan.htm</a></p> <p><a href="https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Book%3A_Introductory_Chemistry_(CK-12)/23%3A_Electrochemistry/23.06%3A_Calculating_Standard_Cell_Potentials">https://chem.libretexts.org/Bookshelves/Introductory_Chemistry/Book%3A_Introductory_Chemistry_(CK-12)/23%3A_Electrochemistry/23.06%3A_Calculating_Standard_Cell_Potentials</a></p>
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		<p>the cell potential under non-standard conditions (use Nernst equation)</p> <ul style="list-style-type: none"><li>• Prepare a Power-Point presentation on electrochemical cell value and feasibility of a reaction</li><li>• Practice interrelating standard Gibbs free change with the electrochemical cell value</li></ul>	<p><a href="https://www.chem.tamu.edu/class/fyp/stone/tutorialnotefiles/electro/nernst.htm">https://www.chem.tamu.edu/class/fyp/stone/tutorialnotefiles/electro/nernst.htm</a></p> <p><a href="http://www.docbrown.info/page01/ExIndChem/electrochemistry11.htm">http://www.docbrown.info/page01/ExIndChem/electrochemistry11.htm</a></p>
<b>Computer Science</b>	<ul style="list-style-type: none"><li>• Understanding the importance of protocols for communication between computers.</li><li>• Exploring the TCP/IP protocol suite and its layered architecture.</li><li>• Analyzing various protocols and their specific purposes.</li><li>• Comparing circuit switching and packet switching, including their benefits and drawbacks.</li></ul>	<ul style="list-style-type: none"><li>• Research and present on various protocols such as HTTP, FTP, POP3, IMAP, SMTP, and BitTorrent.</li><li>• Discuss the specific purposes of each protocol, with a focus on how BitTorrent facilitates peer-to-peer file sharing.</li><li>• Research and present on various protocols such as HTTP, FTP, POP3, IMAP, SMTP, and BitTorrent.</li><li>• Discuss the specific purposes of each protocol, with a focus on how BitTorrent facilitates peer-to-peer file sharing.</li></ul>	<p><a href="#">Khan Academy - Internet 101</a> - Introductory lessons on how the internet works, including protocols and switching.</p>



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		<ul style="list-style-type: none"><li>• Research and present on various protocols such as HTTP, FTP, POP3, IMAP, SMTP, and BitTorrent.</li><li>• Discuss the specific purposes of each protocol, with a focus on how BitTorrent facilitates peer-to-peer file sharing.</li></ul>	
<b>Information technology</b>	<ul style="list-style-type: none"><li>• Create an animation (stop motion and key frame) that meets the requirements of its intended application and audience</li><li>• configure the stage/frame/canvas for an animation, including setting:<ul style="list-style-type: none"><li>○ colour</li><li>○ size</li><li>○ the aspect ratio using rulers, guides and grid settings</li><li>○ snapping options</li></ul></li><li>Import and create vector objects, including:<ul style="list-style-type: none"><li>○ tracing bitmaps</li><li>○ adding text</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Encourage your child to practice past papers and focus on java script and animation tools .</li><li>• Edit images and animate objects using image editing tools</li></ul>	Adobe Learn Animate: <a href="https://www.adobe.com/learn/animate">https://www.adobe.com/learn/animate</a> Udemy: <a href="https://www.udemy.com/topic/adobe-animate/">https://www.udemy.com/topic/adobe-animate/</a>



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<p><b>Mathematics</b> <b>Pure</b> <b>Mathematics 3</b> <b>Trigonometry</b></p>	<p>Understand the relationship of the secant, cosecant and cotangent functions to cosine, sine and tangent, and use properties and graphs of all six trigonometric functions for angles of any magnitude Notes and examples • use trigonometrical identities for the simplification and exact evaluation of expressions, and in the course of solving equations, and select an identity or identities appropriate to the context, showing familiarity in particular with the use of identities, expansions of <math>\sin(A \pm B)</math>, <math>\cos(A \pm B)</math> and <math>\tan(A \pm B)</math> – the formulae for <math>\sin 2A</math>, <math>\cos 2A</math> and <math>\tan 2A</math> – the expression of <math>a \sin \theta + b \cos \theta</math> in the forms <math>R \sin(\theta \pm \alpha)</math> and <math>R \cos(\theta \pm \alpha)</math>.</p>	<p>Research the use of trigonometry in astronomy: the solar system has fascinated the human beings across the world since the start of the civilisation.</p> <ul style="list-style-type: none"> <li>• Astronomers use trigonometry to calculate the distance between the stars, planets &amp; other bodies present in the solar system from Earth.</li> <li>• NASA scientists also use this mathematical technique to design and launch space shuttles and rockets.</li> <li>• Without the knowledge of trigonometry, there would not be any satellites in orbit or missions to the moon by humans.</li> <li>• Trigonometry in Flight Engineering, Navigation, constructions, marine biology, criminology, oceanography</li> </ul>	<p><a href="https://rocketrevise.com/a-level-cambridge/cie-a-level-maths-9709/cie-a-level-maths-p3/">https://rocketrevise.com/a-level-cambridge/cie-a-level-maths-9709/cie-a-level-maths-p3/</a>  <a href="https://alevelmathsrevision.com/pdf-viewer/?file=/downloads/questions-by-category/cie-ial/pure-3-compound-angle-formulae-harder.pdf&amp;qms=true">https://alevelmathsrevision.com/pdf-viewer/?file=/downloads/questions-by-category/cie-ial/pure-3-compound-angle-formulae-harder.pdf&amp;qms=true</a>  <a href="https://cambridgepapers.net/search-result?level=A+Level&amp;subject=Mathematics&amp;subject_code=9709&amp;paper=Pure+Mathematics+3&amp;topic=Trigonometry&amp;subTopic=Compound+Angle&amp;subTopicId=55&amp;level_id=2&amp;subject_id=1&amp;paper_id=6#google_vignette">https://cambridgepapers.net/search-result?level=A+Level&amp;subject=Mathematics&amp;subject_code=9709&amp;paper=Pure+Mathematics+3&amp;topic=Trigonometry&amp;subTopic=Compound+Angle&amp;subTopicId=55&amp;level_id=2&amp;subject_id=1&amp;paper_id=6#google_vignette</a></p>
<p><b>Mechanics</b></p>	<p>Apply Newton’s third law for force exerted by a particle on the ground is equal and opposite to the force exerted by the ground on the particle.</p>	<p>ABS (Anti-lock Braking System) maintain the wheel's friction at or near the limiting value, preventing skidding.  A ladder leaning on a wall is in limiting equilibrium when it's about to slip. Climbers rely on friction and normal forces to stay in place.</p>	<p><a href="https://www.elmirador.edu.co/contenidos/phet/en/simulation/forces-and-motion-basics.html?utm_source=chatgpt.com">https://www.elmirador.edu.co/contenidos/phet/en/simulation/forces-and-motion-basics.html?utm_source=chatgpt.com</a>  <a href="https://www.elmirador.edu.co/contenidos/phet/en/simulation/forces-and-motion-basics.html?utm_source=chatgpt.com">https://www.elmirador.edu.co/contenidos/phet/en/simulation/forces-and-motion-basics.html?utm_source=chatgpt.com</a></p>



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		Use models of a 'smooth' contact, and understand the limitations of this model	nidos/phet/en/simulation/friction.html?utm_source=chatgpt.com
<b>Statistics 2</b>	<p><b><u>Continuous random variables</u></b></p> <ul style="list-style-type: none"> <li>use a probability density function to solve problems involving probabilities, and to calculate the mean and variance of a distribution.</li> </ul> <p><b><u>Sampling</u></b></p> <ul style="list-style-type: none"> <li>understand the distinction between a sample and a population, and appreciate the necessity for randomness in choosing samples</li> <li>explain in simple terms why a given sampling method may be unsatisfactory</li> </ul>	<p>Research and summarise findings with examples on real life application of a probability density function.</p> <p>Make notes to summarise learning that includes formulae and solved examples.</p> <p>Compare and contrast: population and sample.</p>	<p><a href="https://revisionmaths.com/advanced-level-maths-revision/statistics/continuous-random-variables">https://revisionmaths.com/advanced-level-maths-revision/statistics/continuous-random-variables</a></p> <p><a href="#">Continuous Random Variables: Mean &amp; Variance - YouTube</a></p> <p><a href="https://revisionmaths.com/advanced-level-maths-revision/statistics/sampling">https://revisionmaths.com/advanced-level-maths-revision/statistics/sampling</a></p>
<b>Sociology</b>	<p>Mass Media</p> <ul style="list-style-type: none"> <li>To analyse the impact of new media.</li> </ul>	<ul style="list-style-type: none"> <li>Give three arguments against the digital optimist view of the impact of the new media on democracy.</li> </ul>	<a href="http://www.sociology.org.uk/n_media.htm">http://www.sociology.org.uk/n_media.htm</a>
<b>Psychology</b>	<p>Topic: Leadership and management</p> <p>Learning objective- Will be able to explain and analyse the various models on how</p>	Students think about how researchers might investigate this aspect of leadership and share ideas. They can create items for a	Textbook



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## Aim High Progress Study Programme \_ (Year 13) – November 2025

	<p>leaders and followers interact with each other.</p> <p>Learning Outcome- To evaluate measuring leadership using the Leadership Practices Inventory and the core study Fellowship (Kelley, 1988).</p>	<p>questionnaire on the same and create both open and closed questions as well as some rating scales and revise the strengths and weaknesses of using each type of question.</p>	<p><a href="https://hbr.org/1988/11/in-praise-of-followers">https://hbr.org/1988/11/in-praise-of-followers</a></p>
<p><b>Physics</b></p>	<p><b><u>Capacitance</u></b></p> <ul style="list-style-type: none"> <li>Analyse graphs of the variation with time of potential difference, charge and current for a capacitor discharging through a resistor</li> <li>recall and use <math>\tau = RC</math> for the time constant for a capacitor discharging through a resistor</li> </ul> <p><b><u>Ideal Gases</u></b></p> <ul style="list-style-type: none"> <li>Solve problems using the equation of state for an ideal gas</li> <li>Interpret Brownian motion in terms of the movement of molecules</li> </ul>	<ul style="list-style-type: none"> <li>Sketch Voltage-time, Current-time and Charge-time graphs for charging and discharging of a capacitor</li> <li>State and explain in terms of the kinetic model</li> <li>Examine what happens to the pressure inside a tyre when more molecules at the same temperature are pumped into the tyre</li> </ul>	<ul style="list-style-type: none"> <li><a href="https://www.savemyexams.co.uk/a-level/physics/aqa/17/revision-notes/7-fields-their-consequences/7-7-capacitor-charge-discharge/7-7-1-charge-discharge-graphs/">https://www.savemyexams.co.uk/a-level/physics/aqa/17/revision-notes/7-fields-their-consequences/7-7-capacitor-charge-discharge/7-7-1-charge-discharge-graphs/</a></li> <li><a href="https://www.scienceandmathsrevision.co.uk/topic/charging-and-discharging-capacitors/">https://www.scienceandmathsrevision.co.uk/topic/charging-and-discharging-capacitors/</a></li> <li><a href="http://physicsnet.co.uk/a-level-physics-as-a2/thermal-physics/thermal-energy/">http://physicsnet.co.uk/a-level-physics-as-a2/thermal-physics/thermal-energy/</a></li> </ul>



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	<ul style="list-style-type: none"><li>• State the assumptions of the kinetic theory of gases</li><li>• Deduce a relationship between pressure, volume and the microscopic properties of the molecules of a gas</li><li>• relate the kinetic energy of the molecules of a gas to its temperature</li></ul>	<ul style="list-style-type: none"><li>• Explain Boyle's law and applications</li><li>• State the ideal gas equation and explain kinetic model</li><li>• State the relation between temperature and molecular kinetic theory</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/firlaw.html">http://hyperphysics.phy-astr.gsu.edu/hbase/thermo/firlaw.html</a></li><li>• <a href="http://www.physics.usyd.edu.au/super/life_sciences/TP/TP-rev-questions.pdf">http://www.physics.usyd.edu.au/super/life_sciences/TP/TP-rev-questions.pdf</a></li></ul>
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