



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

Subject	Focus	Activities	Useful website
Accounting	<ul style="list-style-type: none"><li>To analyse the usefulness of Managerial Accounting in businesses.</li><li>To develop independent problem-solving skills</li></ul>	<ul style="list-style-type: none"><li>Revise all the topics covered so far in the AS level syllabus.</li><li>Complete all MCQ questions and structures on the topics covered so far.</li><li>Practice question from past paper 2016 – 2020 (Feb/March and May/June series)</li></ul>	<a href="http://www.myaccountinglab.com">www.myaccountinglab.com</a> <a href="http://www.cie.org.uk">www.cie.org.uk</a>
Arabic	<p>مراجعة على أنواع التشبيه والاستعارة (أثناء)</p> <p><b>Learning objectives:</b></p> <p>أن يقارن بين أنواع التشبيهات و التشبيه التمثيلي</p> <p>أن يحلل التشبيه التمثيلي موضحاً موطن الجمال فيه.</p> <p>أن ينتج فقرة تتضمنه -</p>	<p>ارسم خريطة ذهنية موضحاً فيها انواع التشبيه مع التمثيل</p> <p>عبر عن المواقف بجمال من إنشائك تحوي التشبيه</p> <p>مثل لكل نوع من أنواع التشبيه</p> <p>حول الأمثلة من تشبيه تام أو بليغ إلى تشبيه تمثيلي - والعكس</p> <p>يفتح المعلم باب الحوار المنظم للاستماع إلى ملاحظات - الطلاب حول المفاهيم النحوية التي تعلموها</p> <p>(مثل لكل من (البدل -</p>	<p><a href="https://www.youtube.com/watch?v=Mat6R0toiql">https://www.youtube.com/watch?v=Mat6R0toiql</a></p> <p><a href="https://www.youtube.com/watch?v=ZwGlxw4ik0M">https://www.youtube.com/watch?v=ZwGlxw4ik0M</a></p>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

	<p>أن يتعرف الاستعارة ويستخدمها في كتابة فقرة *</p> <p><b>TOPIC</b></p> <p>البدل</p> <p><b>Learning objectives:</b></p> <p>. أن يحدد الطالب البدل في الجمل</p> <p>أن يوظف الطالب البدل في فقرة</p>	<p>(عمل قطعة ويقوم الطلاب باستخراج (البدل -</p> <p>(قم بعمل خريطة ذهنية (البدل -</p>	<p><a href="https://www.youtube.com/watch?v=H4MGzCuUKEs">https://www.youtube.com/watch?v=H4MGzCuUKEs</a></p>
<p><b>Islamic Studies</b></p> <p><b>Arabs</b></p>	<p>TOPIC: حديث الإفك عظة وعبرة - السنن الربانية</p> <p><b>Learning objectives:</b></p> <p>يفسر الآيات من سورة النور</p> <p>يبين الأحكام الواردة في الآيات</p> <p>يوضح مفهوم السنن الربانية وأقسامها</p> <p>يبين خصائص السنن الربانية</p>	<p>يستنتج الآثار السلبية للشائعات على الفرد والمجتمع</p> <p>يوضح القيم التي تضمنتها الآيات</p> <p>يستخرج السنن الشرطية من القرآن الكريم</p> <p>يدلل على أهمية السنن الربانية في حياة الفرد والمجتمع</p>	<p><a href="https://www.youtube.com/watch?v=0Y4w51zJVhY">https://www.youtube.com/watch?v=0Y4w51zJVhY</a></p>
<p><b>Islamic Studies</b></p> <p><b>Non Arabs</b></p>	<p>TOPIC: THE ISLAMIC METHADODOLOGY OF RAISING FAMILIES</p>	<p>WRITE AN ARTICLE THAT SHOWS HOW IMPORTANT IS A HAPPY AND BALANCED FAMILY TO BUILD A HAPPY AND BALANCED</p>	



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

	<p><b>Learning objectives:</b></p> <p><b>-TO COMPREHEND THE IMPORTANCE OF A BALANCED FAMILY</b></p> <p><b>- TO EVALUATE THE CONSEQUENCES OF IMBALANCED FAMILY SYSTEM</b></p>	<p>SOCIETY.ADD ONE HADEETH AND AN EXAMPLE FROM SEERAH THAT SHOWS THE IMPORTANCE OF A HAPPY , BALANCED FAMILY.</p>	<p><a href="https://www.youtube.com/watch?v=0S9sPR1MIRU&amp;ab_channel=MercifulServant">https://www.youtube.com/watch?v=0S9sPR1MIRU&amp;ab_channel=MercifulServant</a></p>
<p><b>Biology</b></p>	<p><b>Discussion based on gap analysis</b></p> <p><b><u>Cell membranes and transport</u></b></p> <ul style="list-style-type: none"> <li>To describe and explain the fluid mosaic model of membrane structure, including an outline of the roles of phospholipids, cholesterol, glycolipids, proteins and glycoproteins.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Create/Draw a model of fluid mosaic membrane</li> <li>Students will demonstrate the movement of substances in and out of the cell</li> </ul>	<ul style="list-style-type: none"> <li>➤ <a href="http://www.ellenjmchenry.com/downloads/Cells_Activities_Chapters1and2.pdf">http://www.ellenjmchenry.com/downloads/Cells_Activities_Chapters1and2.pdf</a></li> <li>➤ <a href="https://www.teachengineering.org/activities/view/van_membrane_activity3">https://www.teachengineering.org/activities/view/van_membrane_activity3</a></li> <li>➤ <a href="http://www.amybrownsceince.com/2011/09/free-osmosisdifusion-lab.html">http://www.amybrownsceince.com/2011/09/free-osmosisdifusion-lab.html</a></li> <li>➤ <a href="https://www.pinterest.com/pin/410742428488301074">https://www.pinterest.com/pin/410742428488301074</a></li> <li>➤ <a href="https://www.ukessays.com/essays/biology/practical-investigation-on-osmosis-biology-essay.php">https://www.ukessays.com/essays/biology/practical-investigation-on-osmosis-biology-essay.php</a></li> </ul>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

			➤ <a href="http://brilliantbiologystudent.weebly.com/osmosis.html">http://brilliantbiologystudent.weebly.com/osmosis.html</a>
<b>Business Studies</b>	<ul style="list-style-type: none"><li>To differentiate between full costing and contribution costing techniques.</li></ul>	Research and critically evaluate the usefulness of the contribution costing technique to the management of a multi-product sports shoe manufacturing business that has operations in more than one country. Present your findings in the form of a report.	<a href="#">Cost Analysis &amp; Decision-making   a2-level-level-revision, business-studies, accounting-finance-marketing, budgeting, cost-analysis-decision-making   Revision World</a>
<b>Chemistry</b>	<b>Discussion based on gap analysis</b> <b>ORGANIC CHEMISTRY:</b> <ul style="list-style-type: none"><li>To understand the terms empirical, molecular and structural formulae, homologous series and functional groups.</li><li>To apply IUPAC rules to naming organic compounds with up to six carbon atoms and containing up to two functional groups.</li></ul>	Activity 1: Giving out molecular modelling kits and get students to build simple straightchain alkanes from methane to hexane  Activity 2:  Compare the empirical, Molecular and structural formulae of organic compounds as a poster activity.  Activity 3:	<ul style="list-style-type: none"><li><a href="http://www.chemistryrules.me.uk/candr/nomenclature.ht">http://www.chemistryrules.me.uk/candr/nomenclature.ht</a></li><li><a href="https://www.chemguide.co.uk/basicorg/isomermenu.htm">https://www.chemguide.co.uk/basicorg/isomermenu.htm</a></li><li><a href="https://www.mytutor.co.uk/answers/69/Alevel/Chemistry/What-is-the-difference-betweenstructural">https://www.mytutor.co.uk/answers/69/Alevel/Chemistry/What-is-the-difference-betweenstructural</a></li></ul>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

	<p><b>RATE OF REACTION:</b></p> <ul style="list-style-type: none"><li>• Explain and use the term rate of reaction</li><li>• Explain qualitatively, in terms of collisions, the effect of concentration changes on the rate of a reaction</li><li>• Construct and interpret a reaction pathway diagram, in terms of the enthalpy change of the reaction and of the activation energy</li><li>• Explain qualitatively, in terms both of the Boltzmann distribution and of collision frequency, the effect of temperature change on the rate of a reaction</li></ul>	<p>Practice drawing the structural and stereoisomers of organic compounds</p> <ul style="list-style-type: none"><li>• Activity 4:  Prepare a brochure for Rules of naming organic compounds along with the properties of homologous series.</li><li>• Activity 1: Research the definition of rate of reaction and correlate it to any physics quantity. Also find out about what makes reaction to occur.</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://www.docbrown.info/page06/FunctionalGroups.html">http://www.docbrown.info/page06/FunctionalGroups.html</a></li><li>• <a href="http://www.docbrown.info/page14/page14orgnomen.htm">http://www.docbrown.info/page14/page14orgnomen.htm</a></li><li>• <a href="http://www.s-cool.co.uk/alevel/chemistry/reactionkinetics">http://www.s-cool.co.uk/alevel/chemistry/reactionkinetics</a></li><li>• <a href="http://www.chemistryrules.me.uk/hfhf/hfhf3.htm">http://www.chemistryrules.me.uk/hfhf/hfhf3.htm</a></li><li>• <a href="http://www.docbrown.info/page03/ASA2rates.htm">http://www.docbrown.info/page03/ASA2rates.htm</a></li><li>• <a href="https://www.youtube.com/watch?v=jctsM6ISVDA">https://www.youtube.com/watch?v=jctsM6ISVDA</a></li></ul>
<b>Computer science</b>	<p>Testing Strategies:</p> <ul style="list-style-type: none"><li>• Choose suitable data for blackbox testing</li><li>• Understand the need for stub testing</li></ul>	<ul style="list-style-type: none"><li>• Encourage your child to develop a software and test a number of small programs, with test plans that they should classify as black box or white box testing. Ask them to focus on the concepts of stub</li></ul>	<p>Introduction to software testing – black box and white box: <a href="http://en.wikipedia.org/wiki/Software_testing">http://en.wikipedia.org/wiki/Software_testing</a></p>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

		<p>testing when developing structured programs and modules.</p>	<p><a href="http://www.pp4s.co.uk/main/tu-testing-intro.html">www.pp4s.co.uk/main/tu-testing-intro.html</a>  <a href="http://en.wikibooks.org/wiki/Alevel_Computing/AQA/Problem_Solving_Programming_Data_Representation_and_Practical_Exercise/Systems_Development_Life_Cycle/Testing">http://en.wikibooks.org/wiki/Alevel_Computing/AQA/Problem Solving, Programming, Data Representation and Practical Exercise/Systems Development Life Cycle/Testing</a></p>
<p><b>Economics</b></p>	<ul style="list-style-type: none"> <li>• Discuss the reasons for government intervention in markets.</li> <li>• Evaluate the justifications for government intervention using subsidies and indirect taxes.</li> </ul>	<p>Research task:</p> <p>Students will research and make presentations and share with class</p> <ul style="list-style-type: none"> <li>• Key examples of pure and quasi-public goods and consider the arguments for and against an increase in government spending on public goods.</li> <li>• Using an example of a merit good, learners consider why they are provided by the government.</li> <li>• Discuss how low prices and high prices in excess supply and excess demand.</li> <li>• Reasons for levying taxes and what types of goods are suitable for taxation.</li> <li>• Contrast the effect of a subsidy with that of a specific tax.</li> </ul>	<p><a href="https://www.tutor2u.net/economics/reference/key-diagrams-positive-production-externalities">https://www.tutor2u.net/economics/reference/key-diagrams-positive-production-externalities</a>  <a href="https://www.tutor2u.net/economics/reference/public-goods">https://www.tutor2u.net/economics/reference/public-goods</a>  <a href="https://www.tutor2u.net/economics/blog/unit-1-micro-public-goods-news-clips">https://www.tutor2u.net/economics/blog/unit-1-micro-public-goods-news-clips</a>  <a href="https://www.tutor2u.net/economics/blog/externalities-and-government-failure-raw-sewage-and-britains-beaches">https://www.tutor2u.net/economics/blog/externalities-and-government-failure-raw-sewage-and-britains-beaches</a></p>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

		<ul style="list-style-type: none"><li>Analyse and evaluate government subsidies to producers and consumers in different markets.</li></ul>	<a href="https://www.tutor2u.net/economics/reference/subsidies-2021-revision-update">https://www.tutor2u.net/economics/reference/subsidies-2021-revision-update</a>
<b>Mathematics Edexcel</b>	<b>Trigonometry</b> <ul style="list-style-type: none"><li>Prove trigonometric identities and solve trigonometric equations</li><li>Analyse and solve problems on application of radian measures</li></ul>	<p>Write down the steps required to solve three different trigonometric equations.</p> <p>Solve examination questions on Trigonometry and radians, self marking using CIE marking scheme and taking corrective measures.</p>	<a href="https://www.intmath.com/trigonometric-functions/8-applications-of-radians.php">https://www.intmath.com/trigonometric-functions/8-applications-of-radians.php</a> <a href="https://en.wikibooks.org/wiki/High_School_Trigonometry/Applications_of_Radian_Measure">https://en.wikibooks.org/wiki/High_School_Trigonometry/Applications_of_Radian_Measure</a>  <a href="https://www.purplemath.com/modules/solvtrig.htm">https://www.purplemath.com/modules/solvtrig.htm</a> <a href="https://www.bbc.co.uk/bitesize/guides/zpkdd2p/revision/1">https://www.bbc.co.uk/bitesize/guides/zpkdd2p/revision/1</a>  <a href="http://www.sosmath.com/algebra/solve/solve0/solvtrig.html">http://www.sosmath.com/algebra/solve/solve0/solvtrig.html</a>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

	<p><b><u>Mechanics</u></b> <b><u>Forces and Equilibrium</u></b> Apply Newton's laws of motion to the linear motion of a particle of constant mass moving under the action of constant forces, which may include friction, tension in an inextensible string and thrust in a connecting rod</p> <p>Solve simple problems which may be modelled as the motion of a particle moving vertically or on an inclined plane with constant acceleration solve simple problems which may be modelled as the motion of connected particles.</p>	<p>Create questions for connected particles like a car towing a trailer by means of either a light rope or a light rigid towbar. Consider all the forces acting in the system and applying Newton's laws of motion</p>	<p><a href="https://www.vivaxsolutions.com/math/s/alpulleys.aspx">https://www.vivaxsolutions.com/math/s/alpulleys.aspx</a></p> <p><a href="https://www.a-levelphysicstutor.com/m-kinetics-con-partcls.php">https://www.a-levelphysicstutor.com/m-kinetics-con-partcls.php</a></p>
--	--	--	---





# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

	<p><u>Statistics 1</u> <u>BINOMIAL DISTRIBUTION</u></p> <ul style="list-style-type: none"> <li>• Calculate binomial probabilities using the notation <math>X \sim B(n,p)</math></li> <li>• Calculate expectation and variance for a binomial distribution.</li> <li>• Calculate expectation of a binomial distribution</li> <li>• Recognise practical situations where these distributions are suitable models.</li> </ul>	<p>Model a situation on binomial distribution on real life situation.</p> <p>Differentiate binomial and geometric distributions with suitable example.</p>	<p><a href="https://revisionmaths.com/advanced-level-maths-revision/statistics/permutations-and-combinations">https://revisionmaths.com/advanced-level-maths-revision/statistics/permutations-and-combinations</a></p> <p><a href="https://revisionmaths.com/advanced-level-maths-revision/statistics/probability">https://revisionmaths.com/advanced-level-maths-revision/statistics/probability</a></p>
<p><b>Psychology</b></p>	<p>Cognitive Psychology</p>	<p>Choose any or preferably all 4 studies and create either of these two,</p> <p>A Glogster poster with videos, images and text.</p> <p>A animoto/movie maker video compiling all the studies learnt.</p>	<p><a href="http://www.glogster.com">www.glogster.com</a></p> <p><a href="http://www.animoto.com">www.animoto.com</a></p> <p><a href="http://www.psychologyabout.com">www.psychologyabout.com</a></p> <p><a href="http://www.s-cool.co.uk">www.s-cool.co.uk</a></p> <p><a href="http://www.thestudentroom.co.uk/wiki/A-Level_Psychology">www.thestudentroom.co.uk/wiki/A-Level Psychology</a></p>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

<b>Physics</b>	<p><b>Discussion based on gap analysis</b></p> <p><u>Work, Energy, Power</u></p> <ul style="list-style-type: none"><li>• Understand the concept of work in terms of the product of a force and displacement in the direction of the force</li><li>• distinguish between gravitational potential energy and elastic potential energy</li></ul> <p>solve problems using the relationships <math>P = \frac{W}{t}</math> and <math>P = Fv</math></p> <p><u>Dynamics</u></p> <ul style="list-style-type: none"><li>• To apply the principle of conservation of momentum to solve simple problems, including elastic and inelastic interactions between bodies in one and two dimensions</li></ul>	<p>Give examples of energy in different forms, its conversion and conservation, and apply the principle of conservation of energy to simple examples</p> <p>use the concept of efficiency to solve problems</p> <p>derive, from the defining equation <math>W = Fs</math>, the formula <math>\Delta E_p = mg\Delta h</math> for potential energy changes near the Earth's surface</p> <ul style="list-style-type: none"><li>• Practice numerical problems applying the conservation of momentum principle.</li></ul>	<p><a href="https://www.physicsclassroom.com/class/energy">https://www.physicsclassroom.com/class/energy</a></p> <p><a href="http://www.softschools.com/notes/ap_physics/work_energy_and_power/">http://www.softschools.com/notes/ap_physics/work_energy_and_power/</a></p> <p><a href="https://www.alevelphysicsonline.com/work-and-energy">https://www.alevelphysicsonline.com/work-and-energy</a></p> <p><a href="https://www.s-cool.co.uk/a-level/physics/momentum-and-impulse/revise-it/principle-of-the-conservation-of-momentum">https://www.s-cool.co.uk/a-level/physics/momentum-and-impulse/revise-it/principle-of-the-conservation-of-momentum</a></p> <p><a href="https://www.physicsclassroom.com/class/momentum/u4l2b.cfm">https://www.physicsclassroom.com/class/momentum/u4l2b.cfm</a></p>
----------------	--	--	--



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

<b>English Language</b>	To enhance descriptive writing skills	Practice descriptive writing using real situations as prompts. For instance, choose a location in a mall and observe your surroundings. Take notes on what you see, hear, feel.... Then give yourself 1 hour to write a piece based on your observations.	<a href="http://study.com/academy/lesson/descriptive-writing-definition-techniques-examples.html">http://study.com/academy/lesson/descriptive-writing-definition-techniques-examples.html</a>
<b>Art and Design</b>	AO1, AO2 and AO3  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.  To demonstrate understanding of conveying a personal response though fine art, working to a theme and considering artistic constraints and problems.	<a href="http://www.studentartguide.com">www.studentartguide.com</a>
<b>Information Technology</b>	<b>Theory:</b> Hardware and software <ul style="list-style-type: none"><li>▪ Discussion on user Interfaces</li><li>▪ Types of software</li><li>▪ Differentiate between compilers and Interpreters.</li></ul>	Activities: Students to create presentations on hardware and software and highlight key points on types of hardware and software.	<a href="https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-international-as-and-a-level-information-technology9626/">https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-international-as-and-a-level-information-technology9626/</a>



# The Winchester School



## Aim High Progress Study Programme \_ (Year 12) –December \_2022

	<p>2. The digital divide</p> <ul style="list-style-type: none"><li>• Factors that contribute to wards widening the digital divide gap</li><li>• Impact on society</li></ul> <p><b>Practical:</b></p> <ul style="list-style-type: none"><li>• Database concepts</li><li>• Import tables into database</li></ul> <p>3. Queries and Reports'</p> <p>4. Grouped Reports</p> <p>5. Normalization concepts</p> <p>6. Dynamic and Static Queries</p> <p>7. Spreadsheets</p> <p>Vlookup, Hookup functions.</p> <p>8. Multiple if statements</p> <p>9. Left, Right, Concatenate</p> <p>10. Pivot tables</p>	<p>Create online posters and presentations on Digital divide and its impact on society.</p> <p>Students to work on advanced Database and spreadsheet concepts and Past paper Practice</p>	
--	--	---	--