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

Subject	Focus	Activities	Useful website
Accounting	<ul style="list-style-type: none"> To analyse the structure of limited companies and the sources of raising capital. To describe the type of businesses that would use of unit, job and batch costing system. To apply costing concepts to make business decisions and recommendations. 	<ul style="list-style-type: none"> Prepare a sway presentation analyzing the structure of limited companies which should include the following – <ul style="list-style-type: none"> ➤ Features of limited companies ➤ Share capital - meaning of and accounting for ➤ Capital and revenue reserves ➤ Loan capital ➤ Preparation of internal final accounts and balance sheets of limited companies. Present a write up on type of businesses that would use of unit, job and batch costing system. <p>OR</p> <ul style="list-style-type: none"> Prepare a Ted Ed Flipped Lesson on the topic. 	www.myaccountinglab.com , www.bized.co.uk www.cie.org.uk , http://www.accounting-world.com/ https://www.investopedia.com/ https://study.com/search/text/academy.html?q=accounting#/topresults/accounting
Arabic (Arabs)	<p>TOPIC:</p> <p>قصيدة: المساء - خليل مطران</p> <p>نص وصفي: الصغيران - الراجعي</p>	<p>أن ينثر الطالب الأبيات نثرًا أدبيًا</p> <p>أن يدلل على عاطفة الشاعر في الأبيات</p> <p>أن يستخرج مظاهر البلاغة من الأبيات</p>	https://www.youtube.com/watch?v=S3Znr1aHcl



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	<p>مقال: أي الناس أسعد؟</p> <p>نحو: الأسماء الخمسة والأفعال الخمسة</p> <p>)Learning objectives:</p> <p>أن ينثر الطالب الأبيات نثرًا أدبيًا</p> <p>أن يدلل على عاطفة الشاعر في الأبيات</p> <p>أن يستخرج مظاهر البلاغة من الأبيات</p> <p>أن يحلل أنواع الوصف في القصة</p> <p>أن يضع نهاية مختلفة للقصة</p> <p>أن يميز ملامح الشخصيات في القصة</p> <p>أن يقارن نص الصغيران بنص آخر</p> <p>أن يدلل على رأي الكاتب في المقال</p> <p>أن ينقد الأدلة التي ساقها الكاتب في المقال</p> <p>أن يضيف أدلة جديدة من إبداعه للمقال</p> <p>أن يقارن بين مقال دراسته ومقال آخر</p>	<p>أن يحلل أنواع الوصف في القصة</p> <p>أن يضع نهاية مختلفة للقصة</p> <p>أن يميز ملامح الشخصيات في القصة</p> <p>أن يقارن نص الصغيران بنص آخر</p> <p>أن يدلل على رأي الكاتب في المقال</p> <p>أن ينقد الأدلة التي ساقها الكاتب في المقال</p> <p>أن يضيف أدلة جديدة من إبداعه للمقال</p> <p>أن يقارن بين مقال دراسته ومقال آخر</p> <p>أن يعرب الأسماء الخمسة والأفعال الخمسة ويميز بينها</p>	<p>https://www.youtube.com/watch?v=-PDN8_13zXI</p> <p>https://www.youtube.com/watch?v=f8Peo7zN6yQ</p> <p>https://www.youtube.com/watch?v=EKbFFHYQYi8&t=113s</p> <p>https://www.youtube.com/watch?v=5Dy3vwxvptw&t=11s</p>
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	أن يعرب الأسماء الخمسة والأفعال الخمسة ويميز بينها		
Islamic Studies Arabs	<p>الله نور السماوات والأرض TOPIC:</p> <p>Learning objectives:</p> <p>1- أن يفسر الآيات الكريمة من سورة النور تفسيراً تحليلياً</p> <p>2- أن يبين أهمية علاقة المؤمن بأسماء الله الحسنى وصفاته الفضلى</p> <p>الأدب مع الرسول محمد صلى الله عليه TOPIC: وسلم</p> <p>Learning objectives:</p> <p>1- أن يعدد مظاهر تكريم الرسول صلى الله عليه وسلم</p>	<p>عمل مشروع عن أسماء الله تعالى الحسنى</p> <p>عمل لوحات عن دلالات اسم الله تعالى النور</p> <p>البحث عن آداب الدعاء بأسماء الله تعالى الحسنى</p>	<p>https://www.youtube.com/watch?v=QXdyT-crNBE</p>



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	<p>أن يستدل من السيرة النبوية على -2 حسن أخلاق النبي صلى الله عليه وسلم مع الجميع.</p>	<p>البحث عن علاقة النبي صلى الله عليه وسلم مع المخالفين له في العقيدة.</p> <p>الاستدلال من القرآن الكريم على وجوب توقير النبي صلى الله عليه وسلم</p> <p>عمل لوحات عن كيفية الاقتداء بالنبي صلى الله عليه وسلم في جميع أحواله</p>	<p>https://www.youtube.com/watch?v=we67fxbyx_c</p>
<p>Islamic Studies</p> <p>Non Arabs</p>	<p>TOPIC: THE SLANDER AGAINST AYESHA (RA) AND MORAL LESSON.</p> <p>Learning objectives:</p> <ul style="list-style-type: none"> • To appreciate the magnificent character of Ayesha(RA) • To comprehend the consequences of rumours on individual and society 	<p>SEARCH AN EXAMPLE FROM SEERAH THAT SHOWS HOW DOES SPREADING RUMOR IS DANGEROUS. HOW CAN WE SAVE OURSELVES FROM BELIEVING THE RUMOURS? RECORD THE VIDEO.</p>	<p>https://www.youtube.com/watch?v=y5-qgwegL2g&t=3s</p>



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Biology	<u>Transport in Mammals</u> <ul style="list-style-type: none">• Explain the relationship between the structure and function of arteries, veins and capillaries.• Describe the role of haemoglobin in carrying oxygen and carbon dioxide with reference to the role of carbonic anhydrase, the formation of haemoglobinic acid and carbamino haemoglobin.• Describe and explain the significance of the oxygen dissociation curves of adult haemoglobin at different carbon dioxide concentrations (the Bohr effect).• Explain the differences in the thickness of the walls of the different chambers in terms of their functions with reference to resistance to flow.• Describe the cardiac cycle (including blood pressure	<ul style="list-style-type: none">• Diagrammatically explain the structure of heart, highlighting the differences in chambers.• Using Bloom's taxonomy to create different level questions on Transport in mammals.• Make plan diagrams of the structure of arteries, veins and capillaries using photomicrographs, showing the distribution of various tissues.• Bullet point the significance of Bohr's effect.• Predict and draw the oxygen dissociation curve for people staying at high altitude.	https://alevelnotes.com/notes/biology/exchange-and-transport/transport-in-animals https://alevelnotes.com/notes/biology/exchange-and-transport/transport-in-animals https://alevelnotes.com/notes/biology/exchange-and-transport/transport-in-animals https://www.youtube.com/watch?v=7bUa3eMlyRk https://www.youtube.com/watch?v=wQ2eCRN02f4
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	<p>changes during systole and diastole).</p> <ul style="list-style-type: none">• Explain how heart action is initiated and controlled (reference should be made to the sinoatrial node, the atrioventricular node and the Purkyne tissue. <p>Transport in Plants</p> <ul style="list-style-type: none">• Describe the pathways and explain symplastic pathway and apoplastic pathway and Casparian strip)• define the term transpiration and justify that it is an inevitable consequence of gas exchange in plants• investigate experimentally and explain the factors that affect transpiration rate using leaf impressions, epidermal peels,	<ul style="list-style-type: none">• Prepare 10 Kahoot Questions on the topic of transport in Plants on Kahoot.• Construct a summary table of xylem vessel element structure linked to an explanation of function (this may be done after G(g)and (h) have been taught). Work out which way water will flow to and from cells / environments with given water potentials (no calculations of water potential are	<p>https://www.youtube.com/watch?v=B5gGwAS_EpaY</p> <p>http://www.microscopy-uk.org.uk/mag/artmar00/watermvt.html</p> <p>http://www.mhhe.com/biosci/pae/botany/histology/html/memtrans.htm</p>
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	<p>and grids for determining surface area</p> <ul style="list-style-type: none">• State that assimilates, such as sucrose and amino acids, move between sources (e.g. leaves and storage organs) and sinks.	<p>expected).</p> <ul style="list-style-type: none">• Research, (apoplast, symplast and vacuolar) and the role of the endodermis and Casparian strip, by giving a brief written / diagrammatic summary of findings.• Justify and explain why transpiration is inevitable, and list the advantages of transpiration.	<p>http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/X/Xylem.html</p>
Business Studies	<p>Topic – Management and Managers</p> <p>To critically evaluate the role of managers using Mintzberg and Henri Fayol's management functions.</p>	<p>Research management by interviewing a local manager (parent, relative, friend, etc.), or by doing equivalent internet research. Learners to find out what the manager does to carry out the following management functions:</p> <ul style="list-style-type: none">• setting objectives and planning• organizing resources• directing and motivating staff• coordinating activities• controlling and measuring performance.	<p>Video clip on Mintzberg to introduce learners to the functions of management. www.youtube.com/watch?v=NRWtdSiU8 – video clip on Henry Mintzberg.</p> <p>Video clips about Henri Fayol's management functions.</p> <p>Henri Fayol's Principles of Management – YouTube</p> <p>Fayol's Principles of Management - Simplest Explanation Ever – YouTube</p>



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		Present your findings in the form of a Report or Sway Presentation.	
Chemistry	<p>GROUP 17:</p> <ul style="list-style-type: none">To explain the trend in volatility of chlorine, bromine, and iodine.To describe the relative reactivity of the elements as oxidizing agentsTo describe the relative thermal stabilities of the hydrides in terms of bond energiesTo describe the reactions of halide ions, chlorineTo describe the industrial importance of halogens and their compounds <p>REDOX REACTIONS:</p> <ul style="list-style-type: none">To calculate oxidation numbers of elements in compounds and ions.To describe and explain redox processes in terms of electron	<ul style="list-style-type: none">Write the chemical equations of group 17 elements along with the observationsPrepare an Infographic poster on the concept of disproportionationGive some real life applications for the uses of halogens. <ul style="list-style-type: none">Write the chemical equations of group 17 elements along with the observationsPrepare an Infographic poster on the concept of disproportionationGive some real life applications for the uses of halogens <ul style="list-style-type: none">Create a checklist for determining the oxidation number of elements in compounds.	<p>https://www.youtube.com/watch?v=u2ogMUDBaf4</p> <p>https://www.chemguide.co.uk/inorganic/group7/properties.html</p> <p>https://www.youtube.com/watch?v=bio1C-7gOUI</p> <p>https://edu.rsc.org/resources/reactions-of-halogens-as-aqueous-solutions/733.article</p> <p>https://www.chemguide.co.uk/inorganic/group7/halogenasaoas.html</p> <p>https://www.chemguide.co.uk/inorganic/group7/halideions.html</p> <p>https://www.youtube.com/watch?v=u2ogMUDBaf4</p> <p>https://www.chemguide.co.uk/inorganic/group7/properties.html</p>



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	<p>transfer and changes in oxidation number</p> <ul style="list-style-type: none">To use changes in oxidation numbers to help balance chemical equations. <p>HALOGENOALKANES:</p> <ul style="list-style-type: none">To explain the chemistry of halogenoalkanes as exemplified by: the following nucleophilic substitution reactions :1) hydrolysis, formation of nitriles, formation of primary amines by reaction with ammonia2) the elimination of hydrogen bromide from 2-bromopropaneTo describe the SN1 and SN2 mechanisms of nucleophilic substitution in halogenoalkanes	<ul style="list-style-type: none">Balancing chemical equations using change in oxidation number.Writing half-equations for species oxidised and species reduced.Give real life applications of redox reactions.Create a mind map or table of reactions of halogenoalkanes, including the equations and conditions for each.Investigate the kinetics of SN1 and SN2 reactions.Solve problems based on equations, to<ul style="list-style-type: none">predict a mechanism, SN1 or SN2justify their choice, explaining why it's SN1 or SN2describe the mechanisms with curly arrows etc.	<p>https://www.youtube.com/watch?v=bio1C-7gOUI</p> <p>https://edu.rsc.org/resources/reactions-of-halogens-as-aqueous-solutions/733.article</p> <p>https://www.chemguide.co.uk/inorganic/group7/halogensasoas.html</p> <p>https://www.chemguide.co.uk/inorganic/group7/halideions.html</p> <p>http://molview.org/</p> <p>http://www.docbrown.info/page06/OrgMechs2.htm</p> <p>https://www.youtube.com/watch?v=Bg3c5c9b1BQ&t=117s</p> <p>https://www.youtube.com/watch?v=Bg3c5c9b1BQ</p>
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	<p>including the inductive effects of alkyl groups</p> <ul style="list-style-type: none">• To explain that primary halogenoalkanes tend• to react via the SN2 mechanism; tertiary halogenoalkanes via the SN1 mechanism and secondary halogenoalkanes by a mixture of the two, depending on structure• To interpret the different reactivities of halogenoalkanes• To recognize the concern about the effect of chlorofluoroalkanes on the ozone layer.	<ul style="list-style-type: none">• To investigate practically the speed that the silver halide precipitates appear when halogenoalkanes are put into ethanolic aqueous silver nitrate, followed by determining the bond energies of the carbon-halogen bond to explain their observations.• Create an infographic poster to spread awareness about the effect of chlorofluoroalkanes on the ozone layer.	<p>https://www.ocr.org.uk/Images/163774-explaining-observations-activity-teacher-instructions.pdf</p> <p>https://www.youtube.com/watch?v=Nr_1HSQ2LIc</p>
Economics	<ul style="list-style-type: none">• Methods and Effects of government intervention in markets• Addressing Income and wealth inequality• AD/AS analysis of the impact of supply-side policy on the equilibrium national income and the level of real output, the price level and employment	<ul style="list-style-type: none">• Learners consider why public goods are provided by government are provided by the government.• Students collect data of a few economies (particularly from their own region) and compare their Gini Coefficient and Lorenz curve for at least two years and comment	<p>https://youtu.be/3lrJYTsKdUM</p> <p>https://youtu.be/v4GESvq28lo</p> <p>https://worldpopulationreview.com/country-rankings/gini-coefficient-by-country</p> <p>http://www.tutor2u.net/economics/revision-notes/as-marketfailure-maximum-prices.html</p>



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	<ul style="list-style-type: none">• The distinction between absolute and comparative advantage.• Benefits of specialisation and free trade.	<p>which countries have performed better or poorly in reducing income inequalities.</p> <ul style="list-style-type: none">• Students discuss using case studies from newspapers on maximum price and minimum prices• Discuss the impact of indirect tax using elastic and inelastic demand curve.• Class discussion which identifies some typical goods provided directly by governments.• Learners demonstrate both maximum and minimum price effects by drawing appropriate graphs on the whiteboard• Class discussion on whether direct provision of goods are effective through government.• Learners research problems with national debt. Put results into a table of advantages and disadvantages.• Using data from different countries explain marginal rates of taxation (mrt) and average rates of taxation (art). <p>In groups, learners:</p> <ul style="list-style-type: none">• research their own or another allocated country's changes in the terms of trade over the last twenty years	<p>https://www.tutor2u.net/economics/reference/inequality-of-income-and-wealth</p> <p>https://www.tutor2u.net/economics/reference/inequality-of-income-and-wealth</p> <p>https://www.tutor2u.net/economics/reference/progressive-and-regressive-taxes</p> <p>https://www.tutor2u.net/search?q=fiscal+policy</p> <p>http://www.businesseconomics.com/country-data.html</p> <p>http://www.economicsonline.co.uk/Global_economics/Policies_to_promote_development.html</p>
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		<ul style="list-style-type: none">• Determine whether they have improved or deteriorated over this period and whether they have been volatile or stable•Assess the implications for the future development of their given economy.	
Psychology	Topic Bandura et al (aggression)	Activities Students practice their skills at designing experiments, incorporating the necessary level of detail.	Links www.verywellmind.com/albert-bandura-biography-1925-2795537 www.youtube.com/watch?v=KHi2dxSf9hw http://www.holah.karoo.net/bandurastudy.htm https://media.thuze.com/MediaService/MediaService.svc/...



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Physics	<ol style="list-style-type: none">1. Progressive wave2. Transverse and Longitudinal wave3. Doppler effect4. EM wave5. Polarisation	<ul style="list-style-type: none">• Introduce phase difference and show plenty of visual examples to help with the explanation.• Ask learners how they think a wave spreads out in a 3D space. How do they think this affects the intensity of the wave? Define intensity and show diagrams to highlight the spreading out of a wave's power through space. the inverse square law.• Video or sound clips of vehicles passing a stationary observer clearly demonstrate the Doppler effect for sound waves.• Set learners questions to practice using the expression $f_o = f_s v / (v \pm v_s)$.• Recall and use Malus's law ($I = I_0 \cos^2\theta$) to calculate the intensity of a plane polarised electromagnetic wave after transmission through a polarising filter or a series of polarising filters.	<p>Ripple tank simulation and Travelling Waves simulation: www.falstad.com/ripple/ www.physicslab.co.uk/twave.html</p> <p>Radio Waves & Electromagnetic Fields simulation and Microwaves simulation: https://phet.colorado.edu/en/simulation/legacy/radio-waves https://phet.colorado.edu/en/simulation/legacy/microwaves</p>
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Sociology	<p>Types of data, methods and research design.</p> <p>Strengths and limitations of different secondary sources of data, including official statistics, personal documents, digital content and media sources</p>	<ul style="list-style-type: none">• Make a 3 minute video on different types of data with examples.• Distinguish between practical and theoretical strengths and limitations. Consider also ethical issues associated with the use of each type of method- write in 500 words	<p>https://revisesociology.com/2016/01/03/research-methods-sociology/</p> <p>(introduction to research methods in sociology, providing an overview of primary and secondary data and methods of collection)</p> <p>www.oool.co.uk/blog/studying-sociology-gcse-and-sociology-a-level-10-research-methods-secondary-sources-ofdata/</p> <p>(overview of primary and secondary sources of data, with examples to illustrate)</p> <p>www.sociology.org.uk/notes/methsec1.pdf</p> <p>(detailed notes on secondary data)</p> <p>Useful websites: www.getting-in.com/guide/gcse-sociology-sampling-techniques-official-statistics-primary-and-secondary-data/</p> <p>(brief comparison of primary and secondary data, with a focus on the advantages and disadvantages of official statistics)</p> <p>www.sociology.org.uk/notes/revgrm4.pdf</p>
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			<p>(detailed mind map looking at advantages and disadvantages of several methods)</p> <p>www.socialresearchmethods.net/kb/ethics.php</p> <p>(discussion on ethics in research)</p> <p>www.sociology.org.uk/n_methods.htm</p> <p>(various links and resources)</p>
English Language	Discursive/ Argumentative writing	<ul style="list-style-type: none">• Research and discuss on topics. a few examples are:• Is a lottery a good idea?• Do curfews keep teens out of trouble?• Are law enforcement cameras an invasion of privacy?• Are we too dependent on computers? <p>Then give yourself 1 hour to write on one of the topics.</p>	<p>http://learn.lexiconic.net/essayspers.htm</p>
Art and Design	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	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.	<p>www.studentartguide.com</p>



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	the different skills to be fully exploited critically.		
Information Technology	<p>Theory:</p> <p>Hardware and software</p> <ul style="list-style-type: none">• Discussion on user Interfaces• Types of software• Differentiate between compilers and Interpreters. <p>Esafety and Heath and safety</p> <p>Describe how personal data can be gathered by unauthorized persons (including: by smishing, vishing, phishing and pharming), and How this might be prevented • Discuss why Esafety is necessary • Describe malware issues (including: Trojan horse, worms, spyware, adware, rootkit, malicious bots, ransomware) • describe a range of potential</p>	<p>Activities: Students to create presentations on hardware and software and highlight key points on types of hardware and software.</p> <p>Students to work on advanced</p> <p>Database and spreadsheet concepts and Past paper Practice.</p> <p>Describe how typical features found in sound editing software are used in practice</p> <p>Describe how file sizes depend on sampling rate and sampling resolution.</p>	<p>https://www.cambridgeinternational.org/programmes-and-qualifications/cambridge-international-as-and-a-level-information-technology9626/</p>



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Computer Science	<p>Programing concepts:</p> <ul style="list-style-type: none">• To use a 'count controlled' loop:<ul style="list-style-type: none">- given pseudocode will use the following structure: FOR <identifier> ← <value1> TO <value2> <statement(s)> ENDFOR- alternatively: FOR <identifier> ← <value1> TO <value2> STEP <value3> <statement(s)> ENDFOR• to use a 'post-condition' loop:<ul style="list-style-type: none">- given pseudocode will use the following structure: REPEAT	<p>Encourage your child to develop a software project to include the following:</p> <p>For example, if the chosen programming language is Python, give a program written in Java. 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/Alevel_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/Alevel_Computing/AQA/Problem Solving, Programming, Data Representation and Practical – Exercise/Fundamentals of Programming/Input and output</p> <p>Operators:</p>
Travel and Tourism	<p>To analyze the impact of sustainable practices on destination.</p>	<p>Research task:</p> <ul style="list-style-type: none">• Create a Google slide or infographic on the sustainable tourism practices followed by the UAE.	<p>https://www.expo2020dubai.com/-/media/expo2020/sustainability/uae-as-sustainable-tourism-destination.pdf https://visitrasalkhaimah.com/blog/sustainable-travel-and-ecotourism-destinations-in-uae/</p>



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		<ul style="list-style-type: none"> Include the economic, environmental, and social sustainability practiced in the country to promote tourism. 	
Statistics 1	<p>Topic : <u>Permutation and combination-Consolidation</u></p> <ul style="list-style-type: none"> Understand the terms permutation and combination, and solve simple problems involving selections. solve problems about arrangements of objects in a line, including those involving repetition and restriction. <p>Topic: <u>Discrete random variables</u></p> <ul style="list-style-type: none"> use formulae for probabilities for the binomial and geometric distributions, and recognise practical situations where these distributions are suitable models. use formulae for the expectation and variance of the binomial 	<p>Research and present your work on application of permutation and combination in real life.</p> <p>Model a situation on discrete random variable from a real life situation.</p> <p>Compare and contrast Binomial distribution and Geometric distribution.</p>	<p>https://revisionmaths.com/advanced-level-maths-revision/statistics/permutations-and-combinations</p> <p>https://www.youtube.com/watch?v=zQAmwgZgObk</p> <p>https://www.khanacademy.org/math/ap-statistics/random-variables-ap/geometric-random-variable/e/geometric-distributions</p> <p>https://www.statisticshowto.com/probability-and-statistics/binomial-theorem/binomial-distribution-formula/</p> <p>https://www.youtube.com/watch?v=dx2AHaUvt4U&list=PLaQBxdrnmtNw7dt-6EzlyWe0V8JZC5xVA</p>



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	distribution and for the expectation of the geometric distribution.		
<u>Mathematics</u>	<u>Pure Mathematics 1</u> Differentiation: <ul style="list-style-type: none">• Apply the derivative of x^n (for any rational n), together with constant multiples, sums and differences of functions.• Apply derivatives of composite functions using the chain rule.• Apply differentiation to gradients, tangents and normals, increasing and decreasing functions and rates of change. Apply differentiation to locate stationary points and determine their nature, and use information about stationary points in sketching graphs.	<u>Pure Mathematics</u> Research on the real-life applications of differentiation. We use the derivative to determine the maximum and minimum values of particular functions (e.g. cost, strength, amount of material used in a building, profit, loss, etc.).	www.mathsisfun.com/calculus/integration-rules.html https://www.tes.com/teaching-resource/a-level-maths-c2-definite-integration-worksheet-6146778 https://www.tes.com/teaching-resource/a-level-maths-c2-definite-integration-worksheet-6146778 https://www.tes.com/teaching-resource/integration-powerpoint-6402321