



Year 13 topics to be covered - Autumn Term 2020/21

Subject	Topics to be studied this term	Recommended preparation
Art	<ul style="list-style-type: none"> ● Project- Influences ● Individual expansion of ideas and work ● Refining and developing their topic ● Making an effective set of work linked to a personal theme ● Extending their skills ● Written essay linked to their own work ● 4 large pieces and one full sketchbook 	<ul style="list-style-type: none"> ● Lots of independent gallery visits(could be virtual) ● Clear documentation of ideas- read around the topic chosen ● Be organised, do not leave sections of book to later ● Annotate as you go along not at the end ● The essay should have a large bibliography make sure you document all of your reading, visits and programmes watched ● Experiment with new materials ● Take photos everywhere - think like an artist
Biology	<ul style="list-style-type: none"> ● photosynthesis ● Modern genetic techniques ● Immunology ● Biodiversity part 2 ● Climate change. 	<ul style="list-style-type: none"> ● read ahead from the text book ● Look back over topics from yr12 linked to these topics. ● Use Seneca learning
Business Studies	<ul style="list-style-type: none"> ● 3.3 DECISION MAKING TECHNIQUES <ul style="list-style-type: none"> 3.3.1 Quantitative sales forecasting 3.3.2 Investment appraisal 3.3.3 Decision trees 3.3.4 Critical Path Analysis ● 3.1 BUSINESS OBJECTIVES AND STRATEGY <ul style="list-style-type: none"> 3.1.1 Corporate objectives 3.1.2 Theories of corporate strategy 3.1.3 SWOT analysis 3.1.4 Impact of external influences 	<ul style="list-style-type: none"> ● Reading in preparation for lesson ● Make notes and annotate as required ● List questions to ask in class ● Seneca Learning
Chemistry	<ul style="list-style-type: none"> ● kinetics 2 ● Energetics 2 ● Equilibrium 2 	<ul style="list-style-type: none"> ● read ahead from the text book ● Look back over topics from yr12 linked to these topics. ● Use Seneca learning ● Past paper questions - physics and maths tutor
Computer	<ul style="list-style-type: none"> ● Boolean algebra 1. Define problems using Boolean logic. 	<ul style="list-style-type: none"> ● Read ahead and revision from textbook (OCR AS level and A level Computer)

Science

- 2. Manipulate Boolean expressions, including the use of Karnaugh maps to simplify Boolean expressions.
- 3. Use the following rules to derive or simplify statements in Boolean algebra: De Morgan's Laws, distribution, association, commutation, double negation.
- 4. Using logic gate diagrams and truth tables.
- 5. The logic associated with D type flip flops, half and full adders.
 - Programming techniques
- 1. Programming constructs: sequence, iteration, branching.
- 2. Recursion, how it can be used and compares to an iterative approach.
- 3. Global and local variables.
- 4. Modularity, functions and procedures, parameter passing by value and by reference.
- 5. Use of an IDE to develop/debug a program.
- 6. Use of object oriented techniques.
 - Algorithms
- 1. Analysis and design of algorithms for a given situation.
- 2. The suitability of different algorithms for a given task and data set, in terms of execution time and space.
- Programming project

Science)

- Recap of all GCSE topics covered in year 10 and 11
- Practice papers from OCR with marking scheme
- Make notes and annotate as required

Drama

- Component 3 prep
- Reading *Road by Jim Cartwright*
- Researching *Jim Cartwright*
- Process of performance informed by context
- Rehearsing an extract of *Road* for a mini performance
- Reading & Watching *Wise Children by Angela Carter & Emma Rice*
- Applying a practitioner - *Kneehigh*
- Using the practitioner to inform your acting process - writing these notes up into an essay
- Creating the world/set/costume/lighting /sound/Puppetry: communicating

- 1980s Theatre
- 1980s Life in Northern England
- Write an Initial paragraph as an actor approaching the role noting the opportunities and challenges of the play *Road*
- Write Paragraph 2 & 3 how you have developed character
- Write Paragraph 4 what you now understand about the character and their reactions though the text, clues, playwright's style.
- Write about how design elements have impacted your role.
- Revise Design elements for Component 1

	<p>meaning of your piece</p> <ul style="list-style-type: none"> ● Performing to an AQA examiner ● Component 1 top up (every week B only) 	
Economics	<ul style="list-style-type: none"> ● Costs and Revenues ● Objectives of firms ● Market structures ● Price Discrimination ● Efficiency ● Income and Wealth ● Labour Market ● Externalities ● National Income ● Inflation 	<ul style="list-style-type: none"> ● Recap over any of these topics that were covered in Year 12 (and Years 10 and 11) if GCSE was taken ● Read ahead from the A2 textbook on the relevant topics ● Read ahead from any revision guides e.g. CGP on these topics ● Read news articles related to these topics ● Read magazine and journal articles related to these topics
English Literature	<ul style="list-style-type: none"> ● Coursework Task Two: 'Translations' and a post-Millennium novel. ● 'The Merchant's Tale' Geoffrey Chaucer ● 'Grapes of Wrath' John Steinbeck 	<ul style="list-style-type: none"> ● Use exemplars to improve essay writing. Use Skills PLC (Handbook Google Classroom) to diagnose and work on areas of writing weakness. ● Use the Support and Extension folders on the Chaucer GC to develop your understanding of the text. ● Take time to review lesson content and add to notes in the form of chapter logs (Steinbeck) or extension thinking (Chaucer). ● Re-read 'Grapes' identifying and annotating connections with 'The Great Gatsby' and American Literature.
Food Science and Nutrition Level 3 Certificate	<ul style="list-style-type: none"> ● Experimenting to Solve Food Production Problems ● Safe food storage ● Foodborne illnesses Microorganisms 	<ul style="list-style-type: none"> ● Watch at least one cooking show each week ● Watch videos to be shared on google classroom and complete corresponding tasks
Further Maths	<ul style="list-style-type: none"> ● A2 Complex Numbers ● A2 Further Algebra ● A2 Further Calculus ● Further Mechanics ● Further Statistics 	<ul style="list-style-type: none"> ● Review A2 Mechanics content ● Review A2 Statistics content ● Review previously taught units in calculus and complex numbers
Geography	<ul style="list-style-type: none"> ● Topic 5: The Water Cycle and Water Insecurity 	<ul style="list-style-type: none"> ● Recap on the hydrological cycle and the processes involved

	<ul style="list-style-type: none"> - The global and local hydrological cycle - Factors influencing the hydrological system over the short and long term - Water insecurity as an issue for the 21st Century ● Topic 7: Superpowers - Defining superpowers and how they have changed over time - The impacts of superpowers on the global economy, political systems and the environment - How superpowers contest spheres of influence 	<ul style="list-style-type: none"> ● Identify threats to water security from reading daily broadsheet newspaper ● Reading a daily broadsheet newspaper
German	<ul style="list-style-type: none"> ● Multiculturalism: ● Integration, ● Rassism ● Reunification ● Peaceful revolution ● Literature: The Reader ● Film: Goodbye Lenin 	<p>Read ahead of each chapter</p> <p>Deutsche Welle - online resources including podcasts and news on current affairs</p>
Government & Politics	<ul style="list-style-type: none"> ● Us Government & Politics ● Elections ● Congress ● Supreme Court ● Civil Rights 	<ul style="list-style-type: none"> ● Stay informed on the US election. ● Watch “KNOck down the House” on Netflix. ● Listen to Americast Podcast
History	<ul style="list-style-type: none"> ● Tudor: Edward & Mary ● American Dream: Lyndon Johnson ● Coursework draft 	<ul style="list-style-type: none"> ● Read books from the reading list ● Listen to podcasts relevant to topics covered.
IT	<ul style="list-style-type: none"> ● Unit 2 - Creating Systems to Manage Information <ul style="list-style-type: none"> → Relational database management systems → Manipulating data structures and data in relational databases → Normalisation → Standard methods and techniques to design relational database solutions → Creating a relational database 	

	<p style="text-align: center;">structure</p> <p style="text-align: center;">→ Evaluating a database development project</p> <ul style="list-style-type: none"> ● Unit 6 - Using Social Media in Business <p>A) Explore the impact of social media on the ways in which businesses promote their products and services</p> <p>A1 Social media websites A2 Business uses of social media A3 Risks and issues</p> <p>B) Develop a plan to use social media in a business to meet requirements</p> <p>B1 Social media planning processes B2 Business requirements B3 Content planning and publishing B4 Developing an online community B5 Developing a social media policy B6 Reviewing and refining plans</p>	
Mathematics	<ul style="list-style-type: none"> ● Unit E: Binomial Theorem ● Unit F: Trigonometry ● Unit G: Parametric Equations ● Unit H: Differentiation ● Unit I: Numerical Methods ● Unit J: Integration 1 ● Unit K: Integration 2 	<ul style="list-style-type: none"> ● Review Unit 4 from Year 1 on trigonometry ● Review Unit 6 from Year 1 on differentiation ● Review Unit 7 from Year 1 on integration
Media	<ul style="list-style-type: none"> ● NEA - Film Marketing Practical Production ● Component 1 Section B - Radio (Late Night Woman's Hour) ● Component 1 Section B - Video Games (Assassin's Creed Series) ● Component 2 Section B - Magazines (Mainstream & Alternative - Vogue & The Big Issue) ● Component 2 Section C - Media in the Online Age (Zoella & Attitude) 	<ul style="list-style-type: none"> ● Use of textbook ● Work through home learning activities for wider media consumption ● Consume magazines/online media set texts independently ● Ensure all homework deadlines are met ● Stay up to date with current issues relating to global news affairs
Music	<ul style="list-style-type: none"> ● 20th Century Music: Impressionism Expressionism Neo-classicism Debussy Poulenc 	<ul style="list-style-type: none"> ● Complete any extra harmony work ● Complete all aspects of online learning ● Use PLCs to respond to listening tasks ● Request any extra listening tasks if needed ● Research around the topic, and familiarise yourself with ALL key definitions ● Read the spec and use the markschemes to ensure you are completing questions in the correct format. ● Consume NEW STYLES OF MUSIC EVERY

		DAY: Listen to Jazz FM, Classic FM, BBC6 Music, look for music documentaries on BBC iPlayer, Sky Arts or Youtube
OCR Sport	<ul style="list-style-type: none"> - Unit 5 Sports performance analysis - Unit 4 Working safely in sport, health and leisure - Unit 17 Injuries in sport - Unit 13 Fitness - Unit 19 Psychology in sport 	<ul style="list-style-type: none"> ● Use provided revision guides to read ahead and familiarise self with new topics. ● Complete home learning tasks set and request questions for topics. ● Exam question practice ● Exam technique ● Regular testing
PE	<ul style="list-style-type: none"> ● Energy systems ● ATP resynthesis ● The recovery process ● Exercise at altitude and heat ● Biomechanical principles ● Levers ● Analysing movement through tech ● Linear motion ● Angular motion ● Fluid mechanics ● Projectile Motion ● Group and team dynamics in sport ● Goal setting in sports performance ● Attribution ● Confidence and self-efficacy ● Leadership in sport ● Injuries in sport ● Stress management to optimise performance ● Commercialisation in Sport ● Route to sporting excellence in UK ● Modern technology in Sport ● EAPI ● Practical performance 	<ul style="list-style-type: none"> ● Use provided revision guides to read ahead and familiarise self with new topics. ● Complete home learning tasks set and request questions for topics. ● Use your 100% challenge on upcoming topics to further your knowledge.
Photography	<ul style="list-style-type: none"> ● Project- personal investigation ● Individual expansion of ideas and work ● Refining and developing their topic ● Making an effective set of work linked to 	<ul style="list-style-type: none"> ● Lots of independent gallery visits (could be virtual) ● Clear documentation of ideas- read around the topic chosen

	<p>a personal theme</p> <ul style="list-style-type: none"> ● Extending their skills ● Written essay linked to their own work ● 15 shoots completed with 10 finals, experimentation, contact sheets, shoot plans, and step by step guides for editing. 	<ul style="list-style-type: none"> ● Be organised, do not leave sections of powerpoint to late ● Annotate as you go along not at the end ● The essay should have a large bibliography make sure you document all of your reading, visits and programmes watched ● Take photos everywhere - think like an artist/ photographer
Physics	<ul style="list-style-type: none"> ● Simple Harmonic Motion ● Gravitational Fields ● Thermal Physics ● Gases ● Electric Fields 	<ul style="list-style-type: none"> ● Complete all pre-reading (read the next double page before attending the lesson) ● Complete the relevant questions from your white exam practise books ● Complete lots of practise questions using physicsandmathstutor.com using the 4 pen method ● Have a go at the problem solving questions on Isaac Physics ● Enjoy Physics! Use our 'reading list' to find books to read, podcasts to listen to or shows to watch. https://docs.google.com/document/d/1_XiAvBvf1RRLXaZ2dV3HAtitnW5noqzx-AM_-HK-Xkk/edit
Product Design	<p>3.2.10: National and international standards in product design</p> <ul style="list-style-type: none"> ● Agencies – BSI/ ISO ● Legislation – ROHS/WEEE ● Eco labelling – mobius loop ● EC energy label ● FSC <p>3.1.2: Performance characteristics of materials</p> <ul style="list-style-type: none"> ● Papers and boards <p>Watercolor paper</p> <ul style="list-style-type: none"> ● Woods: <ul style="list-style-type: none"> ● planed all-round (PAR) ● steam bending ● machining qualities ● moisture resistance ● Toxicity. <p>3.1.2: Performance characteristics of materials</p> <ul style="list-style-type: none"> ● Metals: <ul style="list-style-type: none"> ● structural – H and I beam ● thermal conductivity 	<p>AO2 Section C – Development of design proposal(s) (25 marks)</p> <p>Generate design proposals that take full account of the design brief and specification.</p> <p>Design proposals should reflect on first concepts and may use a variety of media in the development of a prototype that can be manufactured by the student. Constant reference to the design brief and design specification should be evident. Modelling is a key element of this assessment criterion.</p> <p>Produce a comprehensive and fully detailed manufacturing specification.</p> <ul style="list-style-type: none"> ● Ensure deadlines are met ● Take time in free periods to revise and reflect on topics taught and learnt ● Use textbook to read ahead on topics ● Stay up to date on current issues in DT ● Complete home learning tasks set ● Complete past paper style questions to get a feel for the terminology and responses required. ● Do a range of questions from 1 mark to 12 mark questions

	<ul style="list-style-type: none"> • electrical conductivity • melting points • cast iron • gold • titanium • brass • duralumin • pewter. <ul style="list-style-type: none"> • Composites • Polymers • Melting points • Elastomers • Biodegradable Polymers • Metals • Composites • Smart and modern materials <p>Forming, redistribution and addition processes</p> <ul style="list-style-type: none"> • Polymer processes: <ul style="list-style-type: none"> • calendering • Metal processes: <ul style="list-style-type: none"> • cupping • deep drawing • investment casting. 	<ul style="list-style-type: none"> • Read the examiners commentaries • Follow the PLC and Trackers to help with your independent studies.
Psychology	<p>Schizophrenia Relationships Aggression</p>	<ul style="list-style-type: none"> • Read in advance of the lesson • Complete past papers every week • Follow the independent learning study suggestions on google classroom • https://www.aqa.org.uk/subjects/psychology/as-and-a-level/psychology-7181-7182/assessment-resources?start_rank=41