



DURHAM JOHNSTON
COMPREHENSIVE SCHOOL
— DARE TO BE WISE —

Year 13

Curriculum Overview *Half Term 2*

Dear Parent/Carer,

In the following booklet you should find an overview of what your child will be studying this half term in school. We've included key details on what they will be looking at in each subject, how they'll be assessed and what they might do to further develop their understanding. The aim is for this to make it easier for you to work with the school supporting your child with their work.

All lessons last for one hour. In Year 12, students spend 5 hours per week on each of their subjects. They also attend lessons in Preparation for Higher Education on a rotational basis.

The information for each subject is categorised as follows:

Topics / tasks: This is the overview of the topics Year 12 students will be covering this half term.

Content and skills: This explains what areas students will be looking at, and the skills they will be developing during the half term.

Assessment: This explains how students will be assessed on their understanding of this topic.

Stretch and challenge: This gives suggestions of how students can explore this area in more detail if they wish.

Exam Boards

This table shows which exam board the school uses for each qualification.

Click on the [exam board](#) to view the specification via their website.

Subject	Awarding Body	Subject	Awarding Body	Subject	Awarding Body
Art	Edexcel	Ethics and Philosophy (RS)	OCR	Music	AQA
Biology	OCR	French	AQA	Physical Education	AQA
Business	Edexcel	Geography	AQA	Physics	OCR
Chemistry	OCR	German	AQA	Psychology	AQA
Computer Science	AQA	Government and Politics	AQA	Sociology	AQA
Economics	Edexcel	History	OCR	Spanish	AQA
English Language	AQA	Latin	OCR		
English Literature	AQA	Maths	OCR		

Art

Topics / tasks:	Students will be continuing their Personal Investigation projects with guidance by their class teachers in their 2 double lessons. In the single lesson, students will focus on the Related Study element of their A Level coursework.	
Content and skills:	This will depend on the nature of projects being created and the individual student's strengths and interests, with guidance by the class teacher.	
Assessment:	Their practical work will be reviewed and commented on regularly by their class teachers. Technical skills will be assessed in conjunction with the imaginative and creative element of their work, as a higher level of fluency in being able to articulate their ideas using visual language is to be expected at A Level. This will also be expected where written language is used.	The Assessment Objectives (OCR exam board) will be referred to throughout the process. As there will not be an Externally Set Task next year, Assessment will be 100% coursework which includes the Personal Investigation and Related Study. Regular verbal feedback by class teachers and a program of written self-assessment as part of creating the portfolio.
Stretch and challenge:	Extending their work through a greater degree of sophistication including the creative content of their work and the exploration of techniques, materials and processes being used.	Students will be expected to gather independent research for their Related Study which will also inform their Personal Investigations. This could include further 'reading' around their chosen subject to provide a wider context and more in depth understanding of their ideas. A higher level of critical thinking will be evident in their annotation and extended analysis.

Biology

Topics / tasks:	Module 5: 5.2.2 Respiration, 5.1.2 excretion, 5.1.4 hormones, Module 6: 6.1.1 Cellular control
Content and skills:	• Glycolysis, Krebs cycle and oxidative phosphorylation • Aerobic and anaerobic respiration • Different respiratory substrates • Kidney function including transplants and dialysis • Structure and function of the adrenal gland • Hormonal control of blood glucose and diabetes • Mutations and control of gene expression
Assessment:	Assessment using continual past paper questions.
Stretch and challenge:	Preparing for the British Biology Olympiad. (https://www.ukbiologycompetitions.org/british-biology-olympiad/syllabus/)

Business

Topics / tasks:	The importance of consolidation of Year 12 (Themes 1 & 2) work – recommendation 1 hour per Year 12 Theme per week Theme 3: Business Strategy Theme 4: Global Business
Content and skills:	3.3 Evidence based decision-making: time series analysis, decision trees and critical path analysis. 3.6 Causes and effects of change 4.1 Introduce Theme 4 (synoptic) approach 4.1 Growing economies. International trade and business growth Re-enforcement / reminder of: 1. The expected approach / standards. 2. Exam board requirements & assessment overview. 4+8+10+12+20 mark answer expectations 3. Content + use of context + structure / technique. A synoptic approach to exam technique.
Assessment:	Q & A in class. Making good use of plans to ATQ (answer the question) Past exam questions - exclusively time-constrained - building up in time covered. Full Paper 2 (Theme 2 (12) & Theme 3 (13) mock Much more synoptic assessments (4 themes into 3 exams). Theme 4 table
Stretch and challenge:	Taking a topic and leading our 'what's in the news' insight / class discussion into contemporary issues - relevant to previously studied areas of the course e.g., Network Rail use of CPA, HBR / Forbes articles. Issa brother's acquisition of Asda for 36.8 billion – “Big Four” Tech companies – collusion? LVMH and their ever-expanding luxury portfolio https://www.lvmh.com/

Chemistry

Topics / tasks:	MODULE 5: Rates MODULE 6: Organic Synthesis MODULE 5: Acids, Bases and Buffers
Content and skills:	- Monitoring rates - Reaction Rates - The rate equation and rate determining step - Arrhenius equation - Polyesters and Polyamides - Bronsted-Lowry acids and Bases - PH and $[H^+(aq)]$ - Buffers: action, uses and calculations - Neutralisation
Assessment:	Mock examinations – November End of topic tests for each section, past paper questions.
Stretch and challenge:	Students can prepare for the RSC Olympiad which happens in January: https://edu.rsc.org/resources/chemistry-olympiad-past-papers/1641.article

Computer Science

Topics / tasks:	Coursework completion (Development) Sets and Vectors Internet Security Functional Programming
Content and skills:	Students will continue coding their projects whilst documenting the errors that occur along the way Students will revise Set notation, and investigate the importance of Vectors to computation Students will re-visit the terminology associated with the Internet and evaluate the use of public/private key encryption on networks Students will learn how to write higher-order functional programs, and understand the need for the functional programming paradigm in modern day computer systems
Assessment:	Coursework development review x2 Y13 mock
Stretch and challenge:	Study complex database services such as the Amazon RDS, and determine the need for multiple tables for larger problems, and evaluate how functional programming may play a part in this https://aws.amazon.com/ Try to implement your own version of the A* algorithm through code https://en.wikipedia.org/wiki/A*_search_algorithm Investigate the importance of vectors in Neural Networks for AI (you can request a book from Mr O'Connor to aid with this) Study the IBM Quantum computer and investigate how code is written for a quantum machine https://www.ibm.com/quantum-computing/

Economics

Topics / tasks:	Government intervention, the impact of government intervention. Globalisation, specialisation and trade, pattern of trade, terms of trade and trading blocs and the WTO.
Content and skills:	Use of basic and advanced economic terminology, mastering chains of reasoning, application of economic knowledge to different situations, quantitative and qualitative economic analysis and evaluation of case study material.
Assessment:	Past Paper Questions. Mock examination A Level Paper 1 questions.
Stretch and challenge:	Use of textbook. Online material - follow @econdj on Twitter, stay up to date with current affairs - Financial Times, guardian, BBC. Wider reading - see reading list.

English Language

Topics / tasks:	Paper 1: Language, the individual and society Section B: Child Language Acquisition	Paper 2: Language Diversity and Change Section A: Language Change
Content and skills:	• Review the CLA speaking unit after the November mock examination. Set targets for development and look at exemplar essays. • Develop an understanding of how children learn to read and write. This literacy focussed unit will include a study of orthographical, phonological, lexical, pragmatic and grammatical development regarding literacy acquisition. • Evaluate different theories, views and approaches regarding how children learn to read and write. • Practise writing essays by examining exemplars and producing their own paragraphs/essays.	• Develop an understanding of how language has changed from 1700 onwards. This includes an examination of phonological, lexical, grammatical and orthographical change. • Evaluate different theories, approaches and views to language change. • Practise writing essays by examining exemplars and producing their own paragraphs/essays.
Assessment:	• Terminology and theory tests • Past paper questions • In class essays	• Terminology and theory tests • Past paper questions • In class essays
Stretch and challenge:	• Read the literacy section in 'Language Development' (Cambridge Topics in English Language) • Read literacy related articles, such as: https://englishlangsfx.blogspot.com/search?q=literacy • Read 'Child Language' (Matthew Saxton)	• Read 'Language Change' (Cambridge Topics in English Language) • Read 'Attitudes to Language' (Cambridge topics in English Language) • Research and element of language change.

English Literature

Topics / tasks:	Paper 1 Section A: <i>Othello</i> Paper 1 Section B: Unseen Poetry Non Examination Assessment (coursework)	Paper 2 Section C: Comparing <i>Revolutionary Road</i> with one other text
Content and skills:	- Developing understanding of the aspects of love explored in <i>Othello</i> such as jealousy, duty, etc. - Exploring the dramatic methods used by Shakespeare to present the relationships in the text. - Continuing to evaluate how far contextual factors affect the portrayal of love for example social conventions, attitudes to race, etc. - Practising writing essays by examining exemplars and producing their own paragraphs/essays.	- Exploring the context of <i>Revolutionary Road</i>. - Analysing the narrative methods used by Richard Yates to structure the text and develop layers of meaning. - Evaluating how far <i>Revolutionary Road</i> is affected by 'Modern Times' themes such as isolation, gender issues, etc. - Comparing <i>Revolutionary Road</i> to <i>A Streetcar Named Desire</i>. - Practising writing essays by examining exemplars and producing their own paragraphs/essays.
Assessment:	Writing a full Section A: <i>Othello</i> exam (1hr)	Writing a full Section B: Unseen Prose and Section C: Comparing <i>Revolutionary Road</i> with <i>A Streetcar Named Desire</i> exam. (1 hr 40 mins)
Stretch and challenge:	Reading other Shakespearean tragedies such as <i>Titus Andronicus</i> and <i>King Lear</i> . Reading critical materials such as AC Bradley's <i>Shakespearean Tragedies</i> and <i>The Great White Bard</i> by Farah Karim-Cooper.	Reading other works by Richard Yates such as <i>Easter Parade</i> . Reading critical materials such as: https://www.newyorker.com/magazine/2008/12/15/like-men-betrayed https://www.theguardian.com/books/2004/sep/18/featuresreviews.guardianreview26

Ethics and Philosophy (Religious Studies)

Topics / tasks:	OCR Religious Studies
Content and skills:	Philosophy - The nature of God and the different possibilities presented by the key thinkers, including Boethius, Anselm and Swinburne on the relationship between divinity and time; whether the attributes should be understood as subject to the limits of logical possibility or of divine self-limitation. Ethics - Meta-ethics, including Ethical Naturalism, Intuitionism and Emotivism. Developments in Christian Thought – Liberation Theology as a contextual theology within Roman Catholicism, the relationship between Gender and Society/Theology.
Assessment:	Students have essays to prepare for each strand of their A Level work.
Stretch and challenge:	Philosophy - Vardy, <i>The Puzzle of God</i> (1999), Macquarrie, <i>Principles of Christian Theology</i> (1996) Ethics – Moore, <i>Principia Ethica</i> (1903), Ayer, <i>Language, Truth and Logic</i> (1936), Mackie, J.L. (1977) <i>Ethics: Inventing Right and Wrong</i> (1977) Developments in Christian Thought – Tong, <i>Feminist Thought</i> (2013), McGrath, <i>Christian Theology</i> (2013), Tribble, <i>Texts of Terror</i> (1984), Wilcockson, <i>Social Ethics</i> (2010).

French

Topics / tasks:	Language work: 1. completing the work on “Les aspects positifs d’une société diverse” and starting the new topic of “Quelle vie pour les marginalisés”. 2. Continuing work on politics by studying strikes and the unions in France Literature: completing the study of Boule de Suif and moving on to a further story, Madame Sauvage. Speaking: working on their 2 minutes presentation for their IRP (Individual Research Project)
Content and skills:	Language work: reading and listening comprehension skills and speaking skills. Literature: developing skills of writing critical essays in French by completing short summaries and character studies. Speaking: through their IRP work, being able to analyse and evaluate their topic in a discussion
Assessment:	Language work: homework and a Paper 1 (listening-reading-writing) on Units 1 and 4. Literature: writing an essay from a past paper on the year 12 set text, No et Moi.
Stretch and challenge:	Language work: reading in French around the topics, listening to the news in French. Literature: reading other Maupassant short stories

Further Maths

Topics / tasks:	Pure Core Mathematics: • Polar Coordinates: Area of a Polar Curve • Differential Equations: Separation of variables, Integrating Factor, Second Order Differential Equations, Simple Harmonic Motion, Damped Oscillations, Systems of Linear First Order Differential Equations Mechanics • Work, Energy and Power: Work Done by a force that varies with position • Impulse and Momentum: Impulse of a force that varies with time • Differential Equations: forming and solving the equation of motion
Content and skills:	Review and extension of AS topics. Applications and modelling. Interpretations of Results. Proof of Results Examination technique Problem solving Self-evaluation and study skills.
Assessment:	Regular Homework assignments Autumn Mock Exam Statistics Mock Exam once the Statistics Course is Complete
Stretch and challenge:	UKMT Maths Challenges: • British Mathematical Olympiad Round 1 Problem solving on www.maths.nrich.org There are a variety of courses available to help students with problem solving and preparation for entrance exams. Students should check Teams regularly for these opportunities.

Geography

Topics / tasks:	Hazards	Global Systems & Global Governance
Content and skills:	The nature, distribution, causes, effects of and responses to seismic, volcanic, storm and wildfire hazards. In particular focusing on spatial and temporal variations and the role of human vulnerability in affecting the level of risk in contrasting case studies.	The nature and role of trade blocs, transnational corporations (TNCs) and global systems. Then focusing on inequality within global trade, the differential access to markets associated with levels of economic development and trading agreements and its impacts on economic and societal well-being, as well as examining fair trade and ethical investment.
Assessment:	A range of exam-style questions and fact tests. There will be opportunity for peer and self-assessment using mark schemes as well as formal teacher assessment.	A range of exam-style questions and fact tests. There will be opportunity for peer and self-assessment using mark schemes as well as formal teacher assessment.
Stretch and challenge:	Go to the AQA A level Geography website and download past copies of A level paper 1, practice exam questions and check answers using the mark schemes. Reading widely around the topic using the guide provided at the start of the year as well as articles shared on Teams.	Go to the AQA A level Geography website and download past copies of A level paper 2, practice exam questions and check answers using the mark schemes. Reading widely around the topic using the guide provided at the start of the year as well as articles shared on Teams.

German

Topics / tasks:	A2 Grammar: Ongoing <u>Theme 1: Unit 1 – Multiculturalism in the German-Speaking Society: Immigration - Ongoing</u> theme 1, unit 1.0: immigration • theme 1, unit 1.1: reasons for immigration • theme 1, unit 1.2: advantages and disadvantages of immigration • theme 1, unit 1.3: issues affecting a country's migration policy	A2 Writing/Essay: Exam Paper 2: 7662 Literature Book “Der Besuch Der Alten Dame”: Ongoing A2 Speaking: IRP: Ongoing <u>THEME 2: UNIT 4 – GERMANY AND THE EUROPEAN UNION</u> • unit 4.0: Germany and the European Union • unit 4.1: The Role of Germany within Europe • unit 4.2: Advantages and disadvantages of the EU for Germany • unit 4.3: the impact of the EU expansion on Germany
Content and skills:	Students will be developing their listening, speaking, reading, writing, grammar, translation and summarising skills. Students will learn new vocabulary and grammar to support their speaking and writing skills. Students will reinforce their vocabulary and grammar knowledge. Students will prepare their IRP for the speaking exam and practise writing A2 essays about the literature book “Der Besuch der alten Dame”.	
Assessment:	Demonstrating their knowledge in vocabulary and grammar tests as well as completing a mock exam in writing, listening, reading, translating and summarising.	
Stretch and challenge:	Learn more advanced vocabulary, practise German grammar, complete in-depth research on the IRP and write additional essays on the literature book topic.	

Government and Politics

Topics / tasks:	3.2.1. Government and Politics of the USA
Content and skills:	3.2.1.3 The executive branch of government: President; 3.2.1.8 Civil rights; 3.2.2 Comparative politics
Assessment:	Written assignments and mock exam.
Stretch and challenge:	Reading a textbook or teacher notes; Reading a broadsheet newspaper (Guardian, Times, Telegraph, Independent); picking a book from the reading list handed out at the start of term; using www.parliament.uk/briefing-papers/ or www.aqa.org.uk to look for past papers to practice

History

Topics / tasks:	Civil Rights in the USA, 1865-1992: African American civil rights	A topic of their choice related to 20th century British history
Content and skills:	Students will continue to investigate the African American pursuit of Civil Rights, before moving on to study how women in the USA pursued their civil rights. There will be depth studies on the Gilded Age, New Deal and radical feminism. They will be learning to construct historical theses, examine and evaluate interpretations of key periods and demonstrate thematic change over time.	Studying, researching and drafting a 4,000 word essay on a topic of their choosing, supported and guided by teaching staff. Continued revision of British History from 1951-1997, focusing on British Foreign Policy.
Assessment:	Planning and writing essays that cover change across and within the 127 year period of study; writing evaluative analyses of differing interpretations of key moments in the struggle for Civil Rights. There will also be a mock examination.	Engaging in academic supervision from staff. Essay writing on British Foreign Policy, 1951-1997.
Stretch and challenge:	Reading (general): Hugh Brogan, <i>The Penguin History of the USA</i> Andrew Reynolds, <i>America: Empire of Liberty</i> Reading (African American Civil Rights): Adam Fairclough, <i>A Better Day Coming</i> C. Vann Woodward, <i>The Strange Career of Jim Crow</i> Reading (Women's Rights): Doris Weatherford, <i>Victory for the Vote: The Fight for Women's Suffrage and the Century that Followed</i>	Reading: Having chosen a topic for coursework, students can ask teachers for recommendations related to their field of study.

Latin

Topics / tasks:	Verse unseen translation & A-level language work	Set texts (continued): Tacitus, Annals 14 & Virgil, Aeneid Book 2
Content and skills:	Latin verse vocabulary, translation of unseen prose and verse, plus practising A-level style comprehension questions.	Cicero: sections 6-10 Virgil: Bk 2, lines 402-485 Analysing text and literary features, plus developing an understanding of the historical and literary context of the works.
Assessment:	Exam-style language questions, in addition to regular vocabulary tests. There will also be a mock exam.	Exam-style questions, including translation and analysis of the texts.
Stretch and challenge:	Using online resources such as Quizlet to consolidate vocabulary knowledge.	Read about the Julio-Claudian emperors, as context for both authors; read Homer's Iliad and the whole of the Aeneid in translation.

Maths

Topics / tasks:	Parametric Equations: changing between parametric and cartesian form, differentiation of parametric form, integration to find area under a parametric curve Numerical Methods: trapezium rule, change of sign rule, iteration, Newton-Raphson method Further differentiation: implicit differentiation, differential equations Statistical Distributions: Normal distribution Partial Fractions including polynomial division and applications to integration and binomial series
Content and skills:	• Revision and consolidation of previously learned skills • Extension of skills to unfamiliar contexts • Reasoning and problem solving skills
Assessment:	Mock examination. Weekly homework tasks.
Stretch and challenge:	• Completing enrichment tasks on www.nrich.maths.org • Further reading and research

Music

Topics / tasks:	AOS1: Romantic Piano Music: Brahms AOS7: Art Music: Reich Composition: Free Composition/Harmony Solo Performance recordings
Content and skills:	Continuing to develop aural perception skills Exploring cultural context of set topics/composers Assimilating advanced harmonic techniques free composition
Assessment:	Regular exam-style listening questions Longer passages of written prose analysis Formative assessment of evolving Free Composition/Harmony
Stretch and challenge:	Undertake some further reading in the areas of 'Romantic Piano Music' and 'Art Music Since 1910' Revisit previous content and written work, improving in response to teacher feedback

Physics

Topics / tasks:	Module 5 – Newtonian world and astrophysics	Module 6 – Particles and medical physics
Content and skills:	<u>Cosmology</u> • Astronomical distances • The Doppler effect • Hubble's law • The Big Bang theory • Evolution of the universe	<u>Capacitance</u> • Capacitors in circuits • Energy stored by capacitors • Discharging and charging capacitors • Uses of capacitors <u>Electric fields</u> • Coulombs law • Uniform electric fields and capacitance <u>Electromagnetism</u> • Magnetic fields • The motor effect • Charged particles in magnetic fields • Electromagnetic induction
Assessment:	November mock: 'Modelling Physics' paper on Modules 1,2, 3 & 5. In-class assessment, homework assignments.	
Stretch and challenge:	Completing relevant exercises on Isaac Physics website.	

Physical Education

Topics / tasks:	Physiology, psychology and socio-cultural topics
Content and skills:	In psychology students will understand how sports performers use information from the environment to facilitate movement. They will explain how sporting information is stored and used in the memory. Students will understand the influences that determine how decisions are made. In physiology students will examine fluid mechanics. They should understand dynamic fluid force and relate these concepts to drag and lift. In socio-cultural topics students will examine deviance in sport, focussing on violence on and off the pitch and drugs in sport. They will also consider the link between sport and the law.
Assessment:	Everlearner checkpoint tests and long answer questions and exam style questions.
Stretch and challenge:	Use PE journals and internet sources to read beyond set A level text books. Also keep up to date with current sporting issues in relation to topics covered.

Psychology

Topics / tasks:	Topic 3 - Forensic Psychology
Content and skills:	Topic 3 - Offender Profiling, Biological explanations of offending behaviour, Psychological explanations of offending behaviour and dealing with offender behaviour.
Assessment:	Written assignments, multi choice questions and mock assessment in November on a number of AS and A level topics to date.
Stretch and challenge:	Using the text book: Chapter 12

Sociology

Topics / tasks:	Sociology of Crime and Deviance
Content and skills:	Theories of Crime and Deviance; Social distribution of Crime; Globalisation and Crime, State Crime and Green Crime; Punishment, Victims and the CJS.
Assessment:	Written assignments and mock exam.
Stretch and challenge:	Use the textbook and read relevant sections; Read a broadsheet newspaper to find social commentary on these issues; Listening to 'Thinking allowed' on BBC Radio 4 and using their archive; Looking at 'TED' talks that are relevant to sociology; Looking at LSE blogs on social political commentary https://blogs.lse.ac.uk/

Spanish

Topics / tasks:	1. The topic of Multiculturalism in Hispanic Society. 2. The topic of Political Life in the Spanish speaking world. 3. Study of the play “La Casa de Bernarda Alba” by Fernando Fernán-Gómez. 4. Development of the Independent Research Project.
Content and skills:	In the topic of Multiculturalism in Hispanic Society, students will cover the topic of racism, looking specifically at racist and xenophobic attitudes, measures against racism and anti-racist legislation. This will include study of nouns and adjectives, expressing approval and disapproval, using the conditional and future tenses, expressing approval and disapproval, translating the English gerund into Spanish and expressing obligation. In the topic of Aspects of political life in the Hispanic world students will cover the topics of Franco's dictatorship, the evolution of the monarchy in Spain, and Latin American dictatorships. This will include revision of the preterit tense, using the imperfect subjunctive, using a sequence of tenses, speaking and writing about a historical figure, recognising and using ordinal numbers and reading for gist for comprehension. Students will continue to develop their Independent Research Project (IRP), having chosen their title in half term 1. They must ensure that they have a range of sources, including an online source, to enable them to talk about their topic in depth.
Assessment:	Preparing answers to sample questions which will allow them to talk confidently about the language topics covered. Students will be given cards to prepare for speaking lessons using examples from past papers. Feedback will be given orally in Speaking lessons. Listening & summaries will be set in class and marked by their class teacher/or peers and reading comprehensions and translation will be set as homework tasks. Formal assessment will take the form of a November exam and will test all skill areas.
Stretch and challenge:	Reading ahead in the literature. Listening to Spanish news and current affairs. Using Kerboodle interactive to consolidate grammar and vocabulary. Making essay plans for film studied in year12 to be used for revision at the end of Year 13.