



DURHAM JOHNSTON
COMPREHENSIVE SCHOOL
— DARE TO BE WISE —

Year 12

Curriculum Overview *Half Term 3*

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	Media Studies	WJEC
Biology	OCR	French	AQA	Music	AQA
Business	Edexcel	Geography	AQA	Physical Education	AQA
Chemistry	OCR	German	AQA	Physics	OCR
Computer Science	AQA	Government and Politics	AQA	Psychology	AQA
Economics	Edexcel	History	OCR	Sociology	AQA
English Language	AQA	Latin	OCR	Spanish	AQA
English Literature	AQA	Maths	OCR		

Art

Topics/ tasks:	Component one continued, with the addition of a timed 15 hour mock exam outcome
Content and skills:	Students will continue developing their coursework portfolio, with everyone investigating different themes/topics, lessons will be based round individual tutoring. The addition of creating a timed 15hour outcome will form part of the mock exam, with all work created since the start of the term contributing to the mock exam assessment. Content and skills will depend on the individual project, with the focus being refining ideas, demonstrating greater skill in the selected area of study and placing work in a contextual setting.
Assessment:	Work will be assessed using the exam board criteria. The students have copies of this, and we have discussed together what the level of expectation is, and what is required in creating work that covers all the assessment criteria. Student will also continue to receive individual tutoring.
Stretch and challenge:	A-level art students are expected to work in a very independent way, creating work on a regular basis, taking creative risks and expanding their knowledge of art & design through reading and looking at artwork. Ask an art student who their influences are, or who they are inspired by, and they should be able to reel off a few names, with the ability to discuss their work.

Biology

Topics / tasks:	Module 2 - Cell division, diversity and organisation continued Module 3 - Transport in animals and plants
Content and skills:	Cell division – meiosis Stem cell differentiation Cellular organisation into tissues and organs Transport in animals (heart and circulatory system) Transport in plants (xylem and phloem transport)
Assessment:	AS level January mock exam on components of Module 2 and continual assessments using past exam questions, along with an end of topic assessment for each of the sections of the module
Stretch and challenge:	Variety of online courses available - guidance can be personalised to students. For example: www.futurelearn.com/courses/biochemistry or https://www.edx.org/course/subject/biology-life-sciences

Business

Topics / tasks:	Theme 2: Managing Business Activities
Content and skills:	2.1 Raising Finance: Sources and methods of finance, liability 2.2 Financial Planning: Sales forecasting, sales revenue – cost = profit, break even analysis, budgets 2.3 Managing Finance: Final Accounts, ratio analysis (profitability & liquidity) 2.4 Resource Management: productivity, capacity utilisation, stock control & quality management 2.5 External Influences: Economic influences, legislation and competition (STEEPLE C) 1. The expected approach / standards. 2. Exam board requirements & assessment overview. 3. Content + use of context + structure / technique. 4. Revision techniques 5. 2+4+8+10+20 mark expectations 6. Developing and acting on ACTION PLANS for continued progress
Assessment:	Q & A in class. Terminology tests. Past exam questions - including time-constrained. Knowledge check questions at the end of each sub-section (students self-monitor). Full mock exam – synoptic assessment
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. Regularly reviewing / investigating news – seeing impact / response businesses – BBC website good source. Access Teams regularly for up-to-date context to investigate.

Chemistry

Topics / tasks:	Module 2: Redox Module 3: Periodicity and groups Module 4: Alkenes
Content and skills:	• Oxidation number • Electron transfer • Redox equations • Periodic trends in reactivity • Ionisation energies • Periodic trend in melting points • Trends in group 2 • Trends in group 7 • Alkene properties • Stereoisomers • Reactions of alkenes
Assessment:	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 or prepare for the Cambridge L6th Chemistry Challenge which happens in June: http://c3l6.org/

Computer Science

Topics / tasks:	Programming – Use of Abstraction and AQA Skeleton Program Mock preparation Data Representation – Images and Sound Fundamentals of Databases – Entity-Relationships and Normalisation
Content and skills:	Students will continue to apply Abstraction in code, and use “good-practice” techniques Students will have time to prepare for their first Y12 mock assessment Students will analyse an example Skeleton Program in preparation for their Paper 1 exam next year. Students will understand how Images/Sound is stored/interpreted by a computer, and analyse the different techniques used Students will determine the most appropriate E-R model for a given scenario, and construct a fully normalised database from that model
Assessment:	Half-term programming project: Connect 4 (graded assessment) Y12 Mock /75 Chapter 5 (Images and Sound) Test /50 Half-term programming project: “The Worst Code In The World” (graded assessment)
Stretch and challenge:	Continue completing problems from Project Euler Understand how JSON and XML can be used to transfer data from web servers Find out why the rules of Normalisation are not perfect, and why we need BCNF (a 4th stage)

Economics

Topics / tasks:	Economic growth Inflation Employment and unemployment Balance of payments The characteristics of AD (Consumption (C), Investment (I), Government expenditure (G), Net trade (X-M)) The characteristics of AS (Short-run AS & Long-run AS) National income	Injections and withdrawals Equilibrium levels of real national output The multiplier Causes of growth Output gaps Trade (business) cycle The impact of economic growth Possible macroeconomic objectives
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.	
Stretch and challenge:	Use of textbook. Online material - follow @econdj on Twitter, stay up to date with current affairs - Financial Times, The Economist, The Guardian, BBC. Wider reading - see reading list.	

English Language

Topics / tasks:	Paper 1: Language, the individual and society Section A: meanings and representations	Paper 2: Language Diversity and Change Section A: Language and Gender
Content and skills:	• Study a range of texts and explore how meaning is conveyed through language choices. • Students will explore how language is: shaped according to audience, purpose, genre and mode; shaped according to context; used to construct meanings and representations and used to enact relationships between writers, speakers and audiences or between participants within a text. • Practise writing essays by examining exemplars and producing their own paragraphs/essays.	• Develop an understanding of how different social groups use language. This will include a recap of previous units and a study of language and gender. • Evaluate different theories, approaches and views to language and gender. • Practise writing essays by examining exemplars and producing their own paragraphs/essays. • Explore how texts are produced to convey views and opinions about language issues.
Assessment:	• Past paper questions • In class essays • Mock examination (Section A)	• Past paper questions • In class essays • Mock examination (Section A)
Stretch and challenge:	• Read 'Text Analysis and Representation' (Cambridge topics in English Language) • Read 'The English Language' (David Crystal) • Research word classes and political leanings of different publications. • Complete terminology revision.	• Read 'Language and Gender' (Cambridge topics in English Language) • Research language use in a particular occupation. • Read 'Women talk more than men-and other myths about the English Language' (Abby Kaplan) • Read 'The Myth of Mars and Venus' (Deborah Cameron)

English Literature

Topics / tasks:	Paper 1 Section C: <i>The Great Gatsby</i> and pre-1900 Poetry from the AQA Anthology Non Examination Assessment (coursework)	Paper 2 Section A: <i>A Streetcar Named Desire</i> or <i>Skirrid Hill</i> .
Content and skills:	- Continuing to study the pre-1900 Poetry Anthology poems for how they portray love. - Honing essay writing skills, by dissecting exemplars and practising writing paragraphs. - Comparing depictions of love in <i>The Great Gatsby</i> and the pre-1900 poetry. - Beginning to explore possible texts to use in the Non Assessment Examination (coursework)	- Continuing to apply knowledge of prevalent themes in literature from 1945 onwards, for instance isolation, personal identity, issues of race, gender, etc, to the study of <i>Skirrid Hill</i>. - Honing essay writing skills, by dissecting exemplars and practising writing paragraphs.
Assessment:	Writing a full Section C: <i>Gatsby</i> / Pre-1900 Poetry exam (1hr)	Writing a full Section A: <i>Skirrid Hill</i> exam (1hr)
Stretch and challenge:	Read a wide range of pre-1900 texts such as <i>Frankenstein</i> and <i>Heart of Darkness</i> to prepare for NEA (coursework).	Research the life and poetry of Owen Shears. Read other collections such as <i>The Blue Book</i> .

Ethics and Philosophy (Religious Studies)

Topics / tasks:	OCR Religious Studies
Content and skills:	Philosophy of Religion - Teleological argument, challenges to arguments from observation and the ontological argument. Will include reference to Aquinas' Fifth Way, Paley, Hume's criticisms of these arguments for the existence of God from natural religion, the challenge of evolution, Anselm's ontological argument, Gaunilo's criticisms, Kant's criticisms. Ethics – Complete the normative ethical theories and apply to euthanasia. Developments in Christian Thought – Christian moral reasoning and sources of ethics.
Assessment:	Ongoing essays throughout the term to check understanding and provide feedback for areas of development in subject content and essay writing skills.
Stretch and challenge:	Part Five of Hume's 'Dialogues of Natural Religion' [Hume Dialogues Concerning Natural Religion.pdf (uc.edu)] Anselm's Prosologium Parts 2 and 3 [Internet History Sourcebooks (fordham.edu)] Aquinas' Summa Theologica I-II 93-95 [SUMMA THEOLOGIAE: Human law (Prima Secundae Partis, Q. 95) (newadvent.org)], Aristotle's Physics II 3 [Aristotle's Physics II (uh.edu)], Catechism of the Catholic Church 1954-1960 [Catechism of the Catholic Church - The moral law (vatican.va)], Stanford Encycloedia of Philosophy (2005 rev.2011) Aquinas' Moral, Political and Legal Philosophy [http://plato.stanford.edu/entries/aquinas-moral-political/] Exodus 20:1-17, Matthew 25:31-46, 1 Corinthians 13:1-7, Messer, N (2006) SCM Study Guide to Christian Ethics, SCM Press

French

Topics / tasks:	1. Cybersociété 2. Musique 3. Literature: No et Moi
Content and skills:	1. Students will continue their study of the new technologies topic. They will learn topic relevant vocabulary and will work using all four skills: listening, speaking, reading and writing. 2. Students will start the topic of Music, learning specific vocabulary and practising all four skills. 3. Study of literary text.
Assessment:	1. Weekly vocabulary and/or grammar tests and résumés of listening and reading texts. 2. Vocabulary and grammar tests, résumés and writing tasks on the topic of Music. 3. Weekly task set including questions to answer and character summaries.
Stretch and challenge:	1. Students can research use and availability of technology in other French speaking countries. 2. Students will be asked to research a francophone singer/musician to present to the class. 3. Students could further research the main theme of the book, homelessness in France.

Further Maths

Topics / tasks:	Statistics: • Discrete random variables • Chi-squared tests • Correlation and regression • Hypothesis testing	Mechanics: • Work, energy and power Impulse and momentum • Circular motion • Dimensional analysis
	Additional Pure Mathematics: • Surfaces and partial differentiation	
Content and skills:	Applications and modelling. Interpretations of Results. Proof of Results Examination technique Problem solving Self-evaluation and study skills.	
Assessment:	• Regular Homework assignments	
Stretch and challenge:	UKMT Maths Challenges: • British Mathematical Olympiad Round 2 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:	Coastal Systems & Landscapes	Contemporary Urban Environments
Content and skills:	Coastlines of emergence and submergence. Origin and development of associated landforms: raised beaches, marine platforms; rias, fjords, Dalmatian coasts. Human intervention in coastal landscapes. Traditional approaches to coastal flood and erosion risk: hard and soft engineering. Sustainable approaches to coastal flood risk and coastal erosion management: shoreline management/integrated coastal zone management. Case study of a contrasting coastal landscape beyond the UK to illustrate and analyse how it presents risks and opportunities for human occupation and development and evaluate human responses of resilience, mitigation and adaptation.	Urban physical waste generation: sources of waste - industrial and commercial activity, personal consumption. Relation of waste components and waste streams to economic characteristics, lifestyles and attitudes. The environmental impacts of alternative approaches to waste disposal: unregulated, recycling, recovery, incineration, burial, submergence and trade. Comparison of incineration and landfill approaches to waste disposal in relation to a specified urban area. Environmental problems in contrasting urban areas: atmospheric pollution, water pollution and dereliction. Strategies to manage these environmental problems. Dimensions of sustainability: natural, physical, social and economic. Nature and features of sustainable cities. Concept of liveability. Contemporary opportunities and challenges in developing more sustainable cities. Strategies for developing more sustainable cities.
Assessment:	Completing exam style questions that test the ability to interpret and analyse a range of figures as well questions that require the ability to accurately apply detailed knowledge to assess geographical issues and concepts.	Completing exam style questions that test the ability to interpret and analyse a range of figures as well questions that require the ability to accurately apply detailed knowledge to assess geographical issues and concepts.
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:	AS Unit 2: The Digital World AS Unit 3: Youth Culture Film: Das Leben der Anderen and Stasi Germany
Content and skills:	Students will study AS UNIT 2: aspects of German-speaking society, the digital world. Students will study AS UNIT 3: youth culture. Students will study the historical background of the GDR – Stasi Germany. Students will be developing their listening, speaking, reading, writing, grammar, translating and summarising skills. Students will learn new vocabulary and grammar. Students will reinforce their knowledge of regular and irregular verbs, the use of different tenses, German word order, and the use of sub-clauses as well as declensions. Students will practice writing AS essays about the film “Das Leben der Anderen”.
Assessment:	In class, there will be weekly vocabulary and/ or grammar tests.
Stretch and challenge:	Students will broaden their vocabulary related to the digital world and youth culture, enabling them to discuss contemporary issues and interests with greater confidence. Students will also have the opportunity to research the wider historical topic of the fall of the Berlin Wall, developing both their cultural knowledge and their ability to understand authentic German-language sources.

History

Topics / tasks:	The Terror, the Directory and the Rise of Napoleon	Britain from 1945-1960s
Content and skills:	For the French history module, students will be completing their work on the Reign of Terror and its causes and consequences. They will then move onto the rule of the Directory before examining the causes of Napoleon's rise to power, including his military campaigns in Italy and Egypt, 13 Vendemiaire, the Coup of Brumaire and his journey from Consul to Emperor.	For the British history module, students will review Winston Churchill's war diplomacy, his relationship with key allies and his attitude to domestic reconstruction. Reasons for the Labour victory in 1945, Churchill's analysis of the onset of the Cold War, his opinions on the post-war situation in Europe and contribution to British decolonisation are further issues for consideration. Primary source documentation will be analysed and students once more will be practising essay technique in line with OCR guidance.
Assessment:	Students will be regularly assessed using practice examination questions that assess key skills of explanatory writing, building arguments and evaluating different issues and events.	
Stretch and challenge:	There is a wealth of literature about Napoleon. <i>Napoleon the Great</i> by Andrew Roberts is a comprehensive, detailed and enjoyable read by an author clearly infatuated with his subject. A recent episode of the Radio 4 series 'You're Dead to Me' is a light-hearted and worthwhile listen about Napoleon's early years (https://www.bbc.co.uk/programmes/p08yd09s). Mike Duncan's <i>Revolutions</i> podcast (series three) provides an excellent narrative overview of the period.	For the British side, Year 12 should consult Paul Addison, Kevin Jefferys, Stephen Fielding, David Kynaston and Gordon Corrigan to deepen their understanding of the main issues related to British foreign policy and domestic affairs 1940-51. <i>Never Had It So Good</i> and <i>White Heat</i> by Dominic Sandbrook are a good accompaniment to the upcoming material, as is Andrew Marr's <i>A History of Modern Britain</i> . The accompanying documentary series to Marr's book also provides an excellent overview of how British society changed during the twentieth century.

Latin

Topics / tasks:	Cicero – Pro Cluentio & Virgil – Aeneid 12; Complex Language features
Content and skills:	Students will continue studying the prose set text & begin the verse text; in Language lessons, we will continue to consolidate translation skills and work on the more complex language required for A-level, including gerunds, gerundives and conditionals.
Assessment:	Practice literature exam questions and a translation assessment.
Stretch and challenge:	Students can read the rest of the Aeneid in translation and do some research about Rome in the First Century B.C.E.

Maths

Topics / tasks:	Differentiation: first principles, gradient of a curve, tangents and normals, stationary points Integration: indefinite integrals, area under a curve, Fundamental Theorem of Calculus Variable acceleration using differentiation and integration Trigonometry: Trigonometric identities and trigonometric equations Logarithms and Exponentials: definition of logarithms, exponential equations and inequalities, exponential growth and decay, reduction to linear form using logarithms Sampling methods Representation and interpretation of data
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: Techniques (listening, dictation, key terms) AOS1: Baroque Concerto: Bach AOS5: Jazz: Charlie Parker Performance: Repertoire Review Composition: Chorales & Practice Composition 1
Content and skills:	Contextual and historical information, and listening and analysis skills. Techniques of chord construction, voice leading and melodic shape Selecting repertoire and honing performance skills
Assessment:	Regular exam-style listening questions and longer passages of written prose analysis Harmony exercises and a longer practice composition Performance reviews
Stretch and challenge:	Undertake some further reading using online resources, or books from the department Revisit previous content and written work, improving in response to teacher feedback

Politics

Topics / tasks:	3.1.1. Governing the UK
Content and skills:	3.1.1.1. Constitution of the UK; 3.1.1.2. The Judiciary; 3.1.1.3. The legislative/Parliament; 3.1.1.4. The executive/PM 3.1.1.5 Devolution in the UK; 3.1.1.6 The European Union
Assessment:	Written assignments
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/

Physics

Topics / tasks:	Module 3 – Forces and motion	Module 4 – Electrons, waves and photons
Content and skills:	• Force, mass and weight • Centre of mass • Free-body diagrams • Moments and equilibrium • Couples and torques • Triangle of forces • Density and Pressure • Archimedes' principle • Work done and energy • Conservation of energy • Kinetic and gravitational potential energy • Power and efficiency	• Progressive waves • Wave properties • Reflection and refraction • Diffraction and polarisation • Intensity • Electromagnetic waves • Total internal reflection • Superposition of waves • Interference • The Young double slit experiment • Stationary waves
Assessment:	Short topic tests, 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 investigate factors that affect performance such as arousal, anxiety and aggression. In physiology students will gain an introduction to the three major energy systems and examine their contribution to different exercise intensities. Also analyse energy continuum data. In socio-cultural topics students will examine the sociology of sport. They will focus on the impact of equal opportunities on sport and society and understand the processes of socialisation, stratification and social change.
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:	Memory and Social Influence
Content and skills:	Theories of Memory: Multi store memory, Working memory, Long term memory. Theories of Forgetting: Interference and Retrieval failure. Application of Memory & Forgetting: EWT and improving EWT Social Influence – Conformity & obedience
Assessment:	Unit 2 Assessment 3 x assignments and 1 x memory & forgetting mock assessment
Stretch and challenge:	Textbook Chapters 2 and 1

Sociology

Topics / tasks:	Sociology of Families and Households; Sociology of Education
Content and skills:	Sociology of education and methods (methods in context), Families - diversity, demographics, relationships, theories
Assessment:	Written assignments
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:	Unit 2 on <i>El Ciberespacio</i> and the Unit 5 on <i>La Identidad Regional de España</i>. In addition, they will analyse and critically examine aspects of the film <i>Volver</i>.
Content and skills:	In terms of grammar, students will be reviewing tenses including the present and present continuous, <i>ser</i> and <i>estar</i> , the future and conditional tenses, the present subjunctive and the perfect tense in the subjunctive. Moreover, they will be developing all four language skills with particular focus on writing summaries based on listening extracts, using expressions to give pros and cons, the use of idiomatic expressions with impersonal verbs and reading comprehension skills such as identifying correct sentences and completing gap fills.
Assessment:	Students will complete a full mock exam on the first two units covered this year on Unit 1, <i>Los Valores Tradicionales y Modernos</i> , and Unit 4, <i>La Influencia de los Ídolos</i> . It will include an essay question on the film <i>Volver</i> and a speaking mock exam, as well as the listening and reading paper. Weekly vocabulary and/or grammar tests and summaries of listening and reading texts.
Stretch and challenge:	Students can extend their knowledge by researching in more depth the specific identities of the different Spanish autonomous regions and by seeking out online articles and statistics on the use of social media and technology among people in the Hispanic world. Students should also re-watch the film <i>Volver</i> and make notes of key quotations from the film to support their analysis and the arguments they make about the film.