



DURHAM JOHNSTON
COMPREHENSIVE SCHOOL
— DARE TO BE WISE —

Year 13

Curriculum Overview ***Half Term 1***

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 13, 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 13 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

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

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

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.
	Regular verbal feedback by the class teacher 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 6 – Photosynthesis and respiration. Module 5: Homeostasis and excretion.	
Content and skills:	Knowledge	Skills
	• Photosynthesis • Respiration • Homeostasis, negative feedback and temperature regulation • Role of the liver and kidney in excretion	• Investigating photosynthesis and respiration using a variety of different methods • Chromatography of photosynthetic pigments
Assessment:	AS content assessment in September. Assessment of Module 6 from summer term and topics taught this term by continual past paper questions. Mock in November.	
Stretch and challenge:	Preparing for the British Biology Olympiad in February.	

Business

Topics / tasks:	The importance of consolidation of Year 12 (Themes 1 & 2) work – recommendation 1 hour per Year 12 Theme per week. Q & A / review 3.4 Theme 3: Business Strategy.
Content and skills:	3.1.1 Corporate Objectives 3.1.2 Theories of Corporate Strategy 3.1.3 SWOT Analysis 3.1.4 Impact of external influences 3.3 evidence-based decision making: investment appraisal, time series analysis, decision trees and critical path analysis. 3.4 Interpretation of financial statements and ratio analysis. Re-enforcement / reminder of: The expected approach / standards. Exam board requirements & assessment overview. Content + use of context + structure / technique. A more synoptic approach to exam technique.
Assessment:	Q & A in class. Terminology tests. Past exam questions - exclusively time-constrained - building up in time covered. Much more synoptic assessments (4 themes into 3 exams).
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 (critical path analysis), HBR (Harvard Business Review) / Forbes articles.

Chemistry

Topics / tasks:	Lattice enthalpy and Carbonyls Chemistry	
Content and skills:	• Lattice enthalpy Review Hess's law from year 12 then construct Born-Haber cycles to calculate lattice enthalpies. • Enthalpy and entropy calculation Build on understanding of enthalpy from year 12 to calculate Gibbs free energy	• Carbonyl Compounds Investigate reactions of Ketones and Aldehydes, including different conditions for their production and how to reduce carbonyls. Chemical test for Carbonyls and how to prepare a pure dry sample of an organic solid. • Carboxylic acids and esters Reactions of Carboxylic acids, production of esters and different conditions for the hydrolysis of esters.
Assessment:	Topic tests for Redox, Lattice enthalpy and Carbonyls	
Stretch and challenge:	Preparation for the RSC Chemistry Olympiad	

Computer Science

Topics / tasks:	Coursework completion (Design) Object-Oriented Programming Recap Stacks and Queues, Graphs and Trees Backus-Naur Form, Regular Expressions and Reverse Polish Notation Big-O Notation
Content and skills:	Students will complete the Design section of the coursework and begin coding their project Students will apply OOP principles and learn the "good practice" techniques when using it Students will understand the need for Abstract Data Types in programming and apply these to real programming scenarios Students will create Regex definitions to define a valid String, use a BNF tree to check for valid syntax/semantics, and convert infix expressions to post-fix Students will measure the time complexity of algorithms and compare them using Big-O Notation
Assessment:	Coursework Review Test on Regex, BNF and RPN, and Big-O notation Test on Turing Machines, Algorithms, and Databases
Stretch and challenge:	OOP: Look into "Association Aggregation" and "Composition Aggregation" and its importance to OOP modelling Look into the A* algorithm and its application to Graph models Investigate the million dollar "P = NP" problem, and its relevance to intractable problems

Economics

Topics / tasks:	Theme 3: Business behaviour and the labour market		
Content and skills:	- Sizes and types of firms - Business growth - Demergers - Business objectives - Revenue, Costs - Economies and diseconomies of scale	- Normal profits - Supernormal profits and losses - Efficiency - Perfect competition - Monopolistic competition - Oligopoly - Monopoly	- Monopsony - Contestability - Demand for Labour - Supply of Labour - Wage determination in competitive and non-competitive markets.
	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. Multiple choice.		
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 A: Meanings and Representations Section B: Child Language Acquisition	Paper 2: Language diversity and change Section A: Global English
	Non-exam assessment: Language in Action	
Content and skills:	- Developing an understanding of how children acquire the English Language. This will include a study of phonological, lexical, pragmatic and grammatical development regarding speech acquisition. - Evaluate different theories, views and approaches as to how children acquire the English Language. - Practising writing essays by examining exemplars and producing their own paragraphs/essays.	- Develop and understanding of global English and discuss the impact of American English, Pidgin and creole. - Evaluate different theories, approaches and views on Global English. - Practising writing essays by examining exemplars and producing their own paragraphs/essays.
	Exploring and analysing language data independently and developing and reflecting upon their own writing expertise	
Assessment:	Writing Paper 1 Section B essays(1 hour)	Writing Paper 2 Section A essays (45 minutes)
	Marking and grading of their investigation (10%)	
Stretch and challenge:	- Read 'Language Development' (Cambridge Topics in English Language) - Conduct personal research on a case study, such as Genie Wiley. - Read 'Child Language' (Matthew Saxton) - Read 'How Language Works' (David Crystal, Penguin Books)	- Research topics and attitudes on 'EngLangBlog'. - Read 'Attitudes to Language' (Cambridge Topics in English Language) - Conduct personal research into one area of Global English.
	Conduct personal research into their personal investigation area.	

English Literature

Topics / tasks:	Paper 1: Love Through the Ages Section A: <i>Othello</i> NEA: Independent Critical Study (coursework)	Paper 2: Texts in Context Section C: Comparing <i>Revolutionary Road</i> with either <i>Skirrid Hill</i> or <i>A Streetcar Named Desire</i> .
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 evaluating 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. - Evaluate first drafts of NEA (coursework) and work upon targets identified.	- 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>Skirrid Hill</i> and <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) First full draft of NEA (coursework)	Writing a full Section C: Comparing <i>Revolutionary Road</i> with <i>Skirrid Hill</i> or <i>A Streetcar Named Desire</i> exam. (1hr)
Stretch and challenge:	Reading other Shakespearean tragedies such as <i>Hamlet</i> and <i>Antony and Cleopatra</i>. Reading critical materials such as AC Bradley's <i>Shakespearean Tragedies</i>.	Reading critical materials about <i>Revolutionary Road</i> and other literature from 1945 onwards.

Ethics and Philosophy (Religious Studies)

Topics / tasks:	Philosophy - Christian understanding of the nature of God. Ethics - Meta Ethics. Christian Thought - Gender and Society, Gender and Theology.
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.
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:	The topic of diversity (les aspects positifs d'une société diverse) The topic of contemporary politics Short stories by Maupassant -Boule de Suif et autres contes de la guerre Their IRP (individual research project)
Content and skills:	1. Learning specific vocabulary, practising speaking about the topic, reading and listening tasks on the topic. 2. Understanding the historical setting of the stories; analysing key characters
Assessment:	1. Vocabulary tests, extended writing on the topics, grammar exercises. 2. Short character study of Boule de Suif or another main character
Stretch and challenge:	1. Reading more on the topics; looking at the positive aspects of diversity in French speaking countries and changes in the political system in the fifth republic. 2. Researching the author Maupassant

Further Maths

Topics / tasks:	Pure Cure Mathematics • Complex Numbers: Multiple Angle Formulae, Exact Solutions to Polynomial Equations and Series • Polar Coordinates: Sketching Polar Curves, Changing Between Cartesian and Polar Forms, Identifying Maximums and Tangents at the Pole • Hyperbolic Functions: Definitions, graphs, Identities, Solving Equations, Differentiation and Integration Statistics: • Continuous Probability Distributions: Hypothesis Tests for a Population Mean, Confidence Intervals for a Population Mean • Chi-Squared Testing: Goodness of Fit Tests for a Probability Distribution • Non-Parametric Tests. Mechanics: • Impulse and Momentum: Impulse in 2D, Oblique Collisions with a Plane, Collisions of Two Moving Particles • Circular Motion: Tangential Acceleration, Breakdown of Circular Motion Additional Pure Mathematics: • Group Theory: Isomorphism and Algebraic Groups • Surfaces: Stationary Points and Tangent Planes to a Surface
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
Stretch and challenge:	UKMT Maths Challenges: • Senior Maths Challenge • Mathematical Olympiad for Girls • Mathematical Competition for Girls 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 and Global Governance
Content and skills:	Students will learn about the differences between a disaster, hazard and risk and examples of geophysical, atmospheric and hydrological hazards. Students will learn how and why the magnitude and frequency of hazard trends has changed over time and the correlation between vulnerability, hazard exposure and capacity to cope/adapt. They will examine why people live in hazardous places around the world, the factors that affect peoples' perception of hazard risk and the reasons why people respond in different ways to hazards. Students will learn how natural hazards are managed and the stages and usefulness of Park Response Model and the Hazard Management Cycle. Students will examine the structure of the earth and assess the evidence for plate tectonic theory and different theories of plate movement.	Students will learn about the dimensions of globalisation including social, political, economic and cultural globalisation. They will examine the different factors and catalysts of globalisation and how the patterns of production and consumption have changed over time. Students will learn about flows of labour, capital, products and services. They will then examine the relationship between globalisation and security, as well as the relationship between globalisation and transport/communications.
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:	Reading widely around the topic using the guide provided at the start of the year e.g. Flipboard magazines, Geographical magazines, Wider World magazines, World Economic Forum Website, BBC News, The Economist, Popular volcanics' http://popularvolcanics.weebly.com/episodes etc. Go to the AQA A level Geography website and download past copies of A level paper 1 and paper 2, practise exam questions and check answers using the mark schemes.	

German

Topics / tasks:	The topic of Immigration The topic of Germany and the European Union The literature text “Der Besuch der alten Dame” Their IRP (individual research project) Grammar
Content and skills:	Students will be consolidating their knowledge of areas taught in Year 12 German and moving on to the A level German course. Students will study the topics of Immigration and Germany and the European Union. 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 prepare to write an A Level essay about the literature book “Der Besuch der alten Dame”.
Assessment:	Demonstrating their knowledge in vocabulary and grammar tests as well as an assessment in writing.
Stretch and challenge:	Learning more advanced vocabulary, practicing German grammar, complete in depth research on the IRP and write additional essays on the literature book topic.

History

Topics / tasks:	Civil Rights in the USA, 1865-1992: African American civil rights	A topic of their choice related to 20 th century British history
Content and skills:	Students will investigate the ways in which African Americans fought for their civil rights in the USA following the end of the American Civil War. 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.
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.	Engaging in academic supervision from staff.
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> Carson, Garrow et al., <i>Eyes on the Prize: Civil Rights Reader</i>	Reading: Once a topic has been chosen, students can ask teachers for recommendations related to their chosen field.

Latin

Topics / tasks:	Verse unseen translation & A-level language work	Set texts: Tacitus, Annals Book 14 & Virgil, Aeneid Book 2
Content and skills:	Latin verse vocabulary, translation of unseen prose and verse, plus practising A-level style comprehension questions.	Tacitus: sections 1-5 Virgil: Bk 12, lines 268-402 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:	Differentiation: points of inflection Sequences and series: arithmetic series, geometric series, binomial series with negative and rational powers Kinematics: constant acceleration in two dimensions, projectile motion Parametric Equations: changing between cartesian and parametric form, differentiation, integration to find area Trigonometry: inverse and reciprocal trigonometric functions, identities Statistical distributions: normal distribution Integration: trigonometry, exponentials, logarithms, inspection, substitution and integration by parts
Content and skills:	Review and extension of AS topics. Applications and modelling. Examination technique Problem solving Self-evaluation and study skills.
Assessment:	Autumn Mock exam
Stretch and challenge:	UKMT Senior Maths Challenge Maths Olympiad for Girls Problem solving on www.maths.nrich.org

Music

Topics / tasks:	• <u>History & Analysis</u> – Romantic Piano (Chopin) • <u>History & Analysis</u> – Art Music (Shostakovich) • <u>History & Analysis</u> – Review of Baroque & Jazz • <u>Composition</u> – Free composition and advanced harmonic techniques • <u>Performance</u> – Refining recital programme
Content and skills:	• Continuing to develop aural perception skills • Assimilating advanced harmonic techniques into chorales and free composition • Refining performance technique
Assessment:	• 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
Stretch and challenge:	• Regular exam-style listening questions • Longer passages of written prose analysis • 4-part harmony exercises • Performance reviews

Politics

Topics / tasks:	3.2.1. Government and Politics of the USA
Content and skills:	3.2.1.1. The Constitution of the USA 3.2.1.2. The Legislative 3.2.1.3 The Executive 3.2.1.4. The Judiciary
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/ or www.aqa.org.uk to look for past papers to practice.

Physics

Topics / tasks:	Module 5: Newtonian world and astrophysics			
Content and skills:	Module 5.3 – Oscillations - Simple harmonic oscillations - Damping and resonance	Module 5.4 – Gravitational fields - Point and spherical masses - Newton's law of gravitation - Planetary orbits - Gravitational potential and energy	Module 5.5 – Astrophysics and cosmology - Object in the universe - Life cycle of stars - Hertzsprung-Russell diagram	Module 6.1 - Capacitors - Capacitors in circuits - Energy stored by capacitors - Discharging and charging capacitors - Uses of capacitors
Assessment:	Test on Module 5.1 (circular motion, studied last term) 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 socio-cultural lessons they will focus on elite sport and the personal qualities and external support required to achieve success. In psychology students will study information processing systems. This will include response time, memory models and decision making. In physiology students will examine energy systems, demands in relation to performance and developing ideas of advantages and disadvantages of each system.
Assessment:	Everlearner checkpoint test and a long answer question on each area.
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.

Psychology

Topics / tasks:	Topic 1 - Gender Topic 2 - Schizophrenia
Content and skills:	Topic 1 - Sex and gender. • Sex-role stereotypes. • Androgyny and measuring androgyny • The role of chromosomes and hormones • Atypical sex chromosome patterns • Cognitive explanations of gender • Freud's psychoanalytic theory of gender • Social learning theory of gender • The influence of culture & media on gender roles Atypical gender development: gender identity disorder Topic 2 - Classification & symptoms (positive & negative) Diagnosis: reliability & validity • Co morbidity, Gender, Culture bias, Symptom Overlap • Theories/Explanations: Biological (genetics, dopamine, neural correlates) • Psychological – Family dysfunction • Psychological – Cognitive theory inc. dysfunctional thought processes
Assessment:	Written assignments, multi choice questions and a mock assessment of Topic 1.
Stretch and challenge:	Using the text book: Chapters 6 & 8

Sociology

Topics / tasks:	Sociology of Global Development
Content and skills:	Theories of global development, Globalisation, Trade and Aid, Industrialisation, Urbanisation, Environment; Agencies of development, War and conflict, Education, Health, Employment, Demographic Change, Gender
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:	The topic of Multiculturalism The topic of Political life in the Hispanic World Presenting their findings based upon research on a variety of topics studied following AS internal exams. Study of play “La Casa de Bernarda Alba” by Fernando Fernan-Gomez
Content and skills:	Students will present to the class about their opinions and ideas about the film studied in year 12, the Spanish Civil War and dictatorship & research on the play-wright Fernando Fernan-Gomez. Students will present ideas about the prologue of the play and the synopsis. The students will then begin the new yr 13 topics within the broad topic of Multiculturalism including immigration, racism & integration They will concurrently be studying Aspects of political life in the Hispanic world, discussing the importance of politics to young people, unemployment and societal ideals. Students will work on oral fluency and spontaneity. Students will learn how to present confidently on a variety of topics and themes, and this will build confidence for IRP & speaking exam and be good revision of year12 topics for speaking cards and essay content.
Assessment:	Speaking questions & speaking cards in general lessons and speaking lessons. They will be graded on oral fluency, accuracy & spontaneity. They will be given grammar & translation& summary tasks and be graded according to A2 Criteria. 2 essays will be given at the end of the half term to revise film study & as an introduction to the play.
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.