

QMGS Key Stage 5 Curriculum Topics



Academically-Ambitious and Accessible to All

Queen Mary's Grammar School believes that the Quality of Education experienced by students is driven by a curriculum in its broadest sense: the entirety of a student's learning experience, in lessons and beyond. We aim to design and embed a curriculum that is planned and sequenced to develop in our highly academic students the knowledge and skills necessary for their future roles in society, while ensuring that the balanced curriculum offer is accessible to all.

Subject	Year 12	Year 13
Art	<p><u>Portfolio (Personal investigation – 60%)</u> Learners will produce work in response to a centre or learner-set starting point title. From this a portfolio of practical work is developed to show detailed and informed progression of ideas and influences towards a final outcome/response.</p> <p>Work is initially produced in class and at home to build on the development of skills. Individual work will build a portfolio which is marked against the 4 assessment objectives.</p> <ul style="list-style-type: none"> • (A03) Record ideas, observations and insights relevant to intentions, reflecting critically on work and progress. This is covered through the completion of primary and secondary observations completed on a variety of mediums to focus on colour, line, form, tone & texture. All pupils are given the working title of 'Overlap' which they use to decide on the subjects for their observations for A03. • (A01) Artist Research. Develop ideas through sustained and focused investigations informed by contextual and other sources, demonstrating analytical and critical understanding. Pupils are expected to source their own artists that reflect their individual project direction. For each artist explored the following is expected; <ol style="list-style-type: none"> 1. Information about the artists and supporting examples of their work. 2. Written analysis and personal opinion of the work. 3. A piece of artwork in the style of the artist. 4. Experimental pieces linked to the artist's techniques, working title and own project direction. 	<p><u>Builds on from Year 12 through ...</u></p> <ul style="list-style-type: none"> • Analysing year 12 portfolio. Assessing that the project is clearly linking related study to artwork and the portfolio. Reflection made against the assessment objectives of AO3, AO2 & A01. Any possible gaps from missed learning highlighted and individual action plans for year 13 developed. • (A04) December – January. A personal response with sophisticated realisation of intentions. Understanding of visual language, applying formal elements, is perceptive and sophisticated. Completion of the coursework Portfolio and 3000 word written study reflecting on the contextual influences, research and detailed analysis of the work of others by February. <p><u>Externally set Exam project (40%)</u></p> <ol style="list-style-type: none"> 1. From February pupils will be given their OCR Exam paper where they will start working on (A03) which focuses on the recording of ideas, observations and insights relevant to their chosen exam question. 2. From March pupils will focus on (A01) where they will explore chosen artists that inspire their own art work. 3. From April pupils will focus on (A02) and the experimentation of final outcome ideas, medias to demonstrate clear development of ideas. 4. During the 15 hour Art exam after Easter, pupils will produce a final outcome for (A04) which is to reflect their chosen exam question, development and artist inspirations.

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	<ul style="list-style-type: none"> • (AO2) Experimenting with new materials. Explore and select appropriate resources, media, materials, techniques and processes, reviewing and refining ideas as work develops. During the summer term pupils are to develop their individual projects to reflect their chosen artists and chosen theme based on the 'Overlap' starting point. At this point a variety of mediums will be explored such as etching batik, printing, photography, Photoshop etc. • Related study; Research, gallery visits and artists interviews conducted and a first draft of their written study completed over the summer term and summer break. 	<p>All work will be presented to be marked and moderated after the 15 hour Art exam. Marks are submitted to OCR in May and await candidate selection for moderation.</p> <p>Coursework and Exam projects will be externally moderated with an exhibition to present selected work.</p>
Biology	<ul style="list-style-type: none"> • 1 Biological molecules • 2 Cells • 3 Organisms exchange substances with their environment • 4 Genetic information, variation and relationships between organisms 	<ul style="list-style-type: none"> • 5 Energy transfers in and between organisms • 6 Organisms respond to changes in their internal and external environments • 7 Genetics, populations, evolution and ecosystems • 8 The control of gene expression
Business	<p>Theme 1</p> <ul style="list-style-type: none"> • meeting customer needs • the market • marketing mix and strategy • managing people • entrepreneurs and leaders. <p>Theme 2</p> <ul style="list-style-type: none"> • raising finance • financial planning • managing finance • resource management • external influences 	<p>Theme 3</p> <ul style="list-style-type: none"> • business objectives and strategy • business growth • decision-making techniques • influences on business decisions • assessing competitiveness • managing change. <p>Theme 4</p> <ul style="list-style-type: none"> • globalisation • global markets and business expansion • global marketing • global industries and companies (multinational corporations).
Chemistry	<ul style="list-style-type: none"> • Transition skills <p>Physical chemistry</p>	<p>Physical chemistry</p> <ul style="list-style-type: none"> • Gas equilibria • Kinetics

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	<ul style="list-style-type: none"> Amount of substance Bonding Atomic structure Kinetics Energetics Equilibria Redox <p>Inorganic chemistry</p> <ul style="list-style-type: none"> Halogens Group 2 Periodicity <p>Organic chemistry</p> <ul style="list-style-type: none"> Introduction to organic chemistry Alkanes Halogenoalkanes Alkenes Alcohols Organics analysis 	<ul style="list-style-type: none"> Thermodynamics Acids and bases Electrochemistry <p>Inorganic chemistry</p> <ul style="list-style-type: none"> Periodicity Transition metals Reactions of inorganic compounds <p>Organic chemistry</p> <ul style="list-style-type: none"> Nomenclature and isomerism Compounds containing the carbonyl group Aromatic chemistry Amines Polymerisation Amino acids, proteins, and DNA Organic synthesis and analysis Structure determination <p>Chromatography</p>
Computer Science	<p>Paper 1</p> <ul style="list-style-type: none"> The characteristics of contemporary processors, input, output and storage devices. (1.1) Software and software development (1.2) Exchanging data (1.3) Data types, data structures and algorithms (1.4) <p>Paper 2</p> <ul style="list-style-type: none"> Elements of computational thinking (2.1) Problem solving and programming (2.2) 	<p>Paper 1</p> <ul style="list-style-type: none"> Exchanging data (1.3) Data types, data structures and algorithms (1.4) Legal, moral, cultural and ethical issues. (1.5) <p>Paper 2</p> <ul style="list-style-type: none"> Algorithms (2.3) <p>Programming Project</p>
Design & Technology	<p>The core content:</p> <ul style="list-style-type: none"> Woods Metals Plastics 	<p>The year 13 DT curriculum is split up into 3 keys elements:</p> <p>1. NEA</p>

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- Electronics
- Textiles
- Paper and board
- New and emerging technologies
- Sustainability
- Designers and companies
- Ergonomics
- Anthropometrics

All of the above topics have been touched on at KS4 BUT they are explored in far more detail at A level.

The SoW is available as a separate document.

Each core content module is tackled through a design and make project with associated theory content and homework.

Current projects:

- Enamelling
- CAD/CAM project (3D printing)
- QMGS library book stand
- Skills stick
- STARPACK national competition
- Mini-NEA in preparation for the 6.2 NEA

Graphics is taught through each project:

- Sketching
- Isometric
- Perspective
- Oblique
- Exploded views
- Sectional views
- Orthographic projection

An iterative design challenge that should take up about 55 hours of genuine working time for the students in lessons (and with some homework)

This will test the students ability to:

- Identify problems within a context
- To work with a genuine client
- To design for a genuine target market
- Collect relevant research data
- Produce a range of creative design ideas through sketching, models or CAD
- Evaluate their work as it progresses
- Plan and make a prototype model
- To produce a “mock-up” of the final design
- Present the NEA as a formal document

2. THEORY

Topics include:

- Design History
- Designers
- Companies
- Iconic products
- Scale of production
- Sustainability
- Modern industrial practice
- Developments in technology
- Marketing
- Digital design
- Social, moral and ethical issues in DT

3. REVISION

The work covered in year 12 (and at KS3/4) will be revisited on a regular basis. The regular forms tests will revisit knowledge taught in previous years and lessons.

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	<p>NB: All of the above have been introduced at KS3/4 BUT a far higher level of competence is required at A level</p>	
Economics	<p>Microeconomics (Markets and Market Failure):</p> <ul style="list-style-type: none"> • Economics methodology and the economic problem • Demand and elasticities of demand • Supply and price elasticity • Market equilibrium and interrelationships • Applications of demand and supply • Production, costs and revenue • Competitive and concentrated markets • Market mechanism and market failure • Government intervention and failure <p>Macroeconomics (The National Economy):</p> <ul style="list-style-type: none"> • National Economic Performance • Aggregate Demand and aggregate Supply • Aggregate Supply and equilibrium • Economic Growth • Inflation & Deflation • Unemployment • The Balance of Payments • Monetary Policy • Fiscal & Supply Side Policies 	<p>Microeconomics (Markets and Market Failure):</p> <ul style="list-style-type: none"> • Individual economic decision making (Behavioural Economics) • Theory of the firm: Production, Costs and Revenue • Market Structures • Competition Policy • Revisiting market failure and government intervention • The Labour Market • Distribution of income and wealth <p>Macroeconomics (The National and International Economy):</p> <ul style="list-style-type: none"> • The International economy • Revisiting and developing macroeconomic theory • Revisiting fiscal and supply-side policies • Financial markets and monetary policy
English Language & Literature	<p>OCR H474 (EMC)</p> <ul style="list-style-type: none"> • Orientation work on key skills; • Prep for examination- reading tasks on Exploring non-fiction written and spoken texts (C1) • Prep for examination: The language of poetry and plays (C 2) Carol Ann Duffy or William Blake • Begin work on <i>The Great Gatsby</i> (C3) 	<ul style="list-style-type: none"> • Completion of <i>Jerusalem or Streetcar</i> (C2) • Prep for Component 3 Reading as a writer, writing as a reader: inc <i>The Great Gatsby</i> and creative writing • Completion of the two NEA tasks • Revision and supplementary work on C1 and C2 above.

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	<ul style="list-style-type: none"> • Begin work on NEA Independent Study (C4) and <i>Jerusalem</i> or <i>A Streetcar Named Desire</i> (C2) post-Y12 examinations 	
<p>English Literature</p>	<p>Orientation work on key skills;</p> <p>Group 1: Component 2: Comparative and Contextual Study: Dystopia , 'The Handmaid's Tale', Brave New World plus wider reading of other texts, contexts and critical writing of the period. <i>'Hamlet', The Merchant's Prologue and Tale</i>; prep work for exam: Drama and Poetry pre-1900 (Component 1)</p> <ul style="list-style-type: none"> • Begin work after Year 12 exams on NEA: Literature post-1900 (C3) Task 1 (Poetry) and 2 (Comparison) 1900 – Carol Ann Duffy, <i>Jerusalem, White Teeth</i> <p>Group 2:</p> <ul style="list-style-type: none"> • Drama and Poetry pre-1900 (Component 1): • Twelfth Night/Coleridge's poetry/A Doll's House • NEA: Literature post-1900 (C3) Task 1 (Poetry): Heaney • Post EOY exams: • Component 2: Comparative and Contextual Study: Dystopia: Handmaid's Tale • NEA2: text one- White Teeth 	<p>Group 1:</p> <ul style="list-style-type: none"> • NEA: Literature post- 1900 completion of tasks 1 and 2 • Revision of Component 2: Comparative and Contextual Study: Dystopia • Drama and Poetry pre-1900 (Component 1) <i>A Doll's House</i> • Revision of Component 1 and 2 texts in the Spring. <p>Group 2:</p> <ul style="list-style-type: none"> • Complete NEA2: text 2 (Arcadia) • Submission by Christmas • Component 2: Comparative and Contextual Study: Dystopia: • Complete Handmaid's Tale, • <i>1984</i> • Revision of Component 1 and 2 texts in the Spring: Twelfth Night, Doll's House, Coleridge
<p>French</p>	<p>Aspects of Society</p> <ul style="list-style-type: none"> • <u>Changing family life</u> – Marriage and other Partnerships/Different family structures/Inter-generational relationships • <u>Cyber Society</u> – Changes to everyday life/Dangers of digital technology/Current users and Future Developments • <u>The Voluntary Sector</u> – Voluntary work in France/Benefits of voluntary work for recipients/Benefits for volunteers • Artistic Culture 	<p>Aspects of French-speaking Society</p> <ul style="list-style-type: none"> • <u>A diverse society</u> – benefits/tolerance/promoting diversity • <u>Socially marginalised</u> – who/help/attitudes to marginalised • <u>Treatment of criminals</u> – attitudes to crime/prison merits/alternatives to prison <p>Political Life in the French-speaking World</p> <ul style="list-style-type: none"> • <u>Youth and political Engagement</u> – the vote/youth involvement/future of politics

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	<p>Cultural heritage</p> <ul style="list-style-type: none"> • <u>Artistic Culture</u> - Importance/Marketing/ Relevance in Society • <u>Contemporary Music</u> – Diversity/Who listens/Safeguarding the music • <u>Cinema</u> – French cinema/Major developments/ Popularity • <u>Cultural Topic Novel No et Moi</u> 	<ul style="list-style-type: none"> • <u>Demonstrations</u> – unions/strikes/attitudes and tensions • <u>Politics and immigration</u> – Francophone countries/political parties/racism • <u>Cultural Topics</u> – Novel : No et Moi /Film : La Haine • Independent Research Topic – oral exam • Listening, reading, writing and speaking skills covered weekly
<p>Geography</p>	<ul style="list-style-type: none"> • Changing Places (Including fieldtrips to Digbeth and Olympic Park, London) • Global Systems and Global Governance • Hot Desert Systems and Landscapes • Hazards • Non-examined assessment (NEA) • Fieldwork study skills trip to Farchynys (Summer term) 	<ul style="list-style-type: none"> • Non-examined assessment (NEA) • Hazards • Population and the Environment • Water and Carbon
<p>History</p>	<ul style="list-style-type: none"> • Component 1: Breadth study 1K The making of a Superpower: USA: Content 1865-1920 • Component 2: Depth study 2S The Making of Modern Britain: Content 1951–1979 • Component 3: Historical investigation (Personal study) NEA: will have begun this in June of Year 12. 	<ul style="list-style-type: none"> • Component 1: Breadth study 1K The making of a Superpower: USA: Content 1920-1975 • Component 2: Depth study 2S The Making of Modern Britain: Content:1979-2007 • Component 3: Historical investigation (Personal study) NEA: will have completed this by January of Year 13.
<p>Mandarin Chinese</p>	<p>Family</p> <ul style="list-style-type: none"> • family structure: members, 3 generation household • Changing attitudes towards marriage and dating in China • one child policy; the changing child policy in China • generation gap; conflicts in the family; young people and the older generation; attitudes towards young people in the family environment. • Aging population; status of the elderly and responsibility for their care 	<p>Economy & Environment</p> <ul style="list-style-type: none"> • Economic development and issues • Modern Chinese history; Economic boom; Current climate • Environmental issues and consequences • Environmental protection • Green/eco living awareness and movement • Government schemes to reduce pollution and protect environment <p>The impact of the 1978 economic reform in China</p> <ul style="list-style-type: none"> • Causes, consequences, and issues

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	<p>Traditions & Festivals</p> <ul style="list-style-type: none"> • Traditions and customs; Relation to agriculture; the reasons for celebrating traditional festivals in modern era • Mid-autumn festival; Folk tale; Customs and celebration • Dragon-boat festival; Folk tale; Customs and celebration • Qing Ming festival; Folk tale; Customs and celebration <p>Education & Work</p> <ul style="list-style-type: none"> • School life; Typical school day and life; patterns of curriculum • Education system in China; further and higher education provision; inequality of access to quality education • Comparison between UK's and China's education • Student issues; Study Pressure; Parental pressure; Gaokao (University entrance exam) • Employment opportunities; Varied work opportunities • Social-economic gap; Barriers to equal work opportunities; "Peasant workers" • Work-life balance; Work ethics <p>Cultural activities & Internet and social media</p> <ul style="list-style-type: none"> • Literature in the Chinese speaking world • Film in the Chinese-speaking world • Television in the Chinese-speaking world; Chinese music • the role and influence of the internet and social media in all aspects of life • the mass media (including broadcast media, newspaper media and internet media) and how it is evolving • advantages and disadvantages of social media <p>Literature analysis 《一只叫风的鸽子》 A Very Special Pigeon</p>	<ul style="list-style-type: none"> • Super-cities in China; Why do they exist; What are they like • Urban migration; The phenomenon; Causes and effects • Rich-poor gap and inequality of wealth and access to education, health and social care <p>China-UK relationship</p> <ul style="list-style-type: none"> • Trade; Trades in history; Trades in the modern time • Cultural exchanges • Chinese culture in the UK; British culture in China • British Council's role • Role of 中国语合中心 Center for Language Education and Cooperation • Educational exchanges; Existing exchanges • Future envisions <p>Film 《请投我一票》 2007; Please vote for me!</p>
Maths	Year 12 Maths	Year 13 Maths

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<p>and Further Maths</p>	<p>Students will have covered all the AS-content for AS Mathematics by the end of Year 12</p> <p>The first term of A-Level mathematics is designed to give pupils from all schools opportunity to develop their mathematics, mastering the skill from GCSE, which are essential for success throughout the course.</p> <p>To aid students, they have access to a textbook, and personal log-in details to Integralmaths.org. This allows pupils access to a wide range of videos and walk-throughs, as well as additional notes, examples and exercises.</p> <p>The list of topics outlines the majority of the Year 1 work:</p> <ul style="list-style-type: none"> Linear equations Quadratic equations Reciprocal relations Functions Inequalities Surds and Indices Calculus Logarithms and Exponentials Factor theorem and polynomials Binomial expansion Equations of circles Trigonometric functions and equations Proof and Reasoning Vectors in 2 dimensions Mechanics: Kinematics Mechanics: Forces and motion Mechanics: Variable acceleration models Statistics: Probability Statistics: single variable analysis Statistics: Bivariate data Statistics: Binomial distribution. 	<p>Whilst in year 13, pupils continue to work through the year 2 content and cover topics outlined below:</p> <ul style="list-style-type: none"> Further Trigonometric Functions Differentiation of trig, log and exponential functions Chain, product and quotient rule for differentiation Implicit differentiation Integration of trig, log and exponential functions Parametric functions Parametric differentiation Integration by substitution Integration by parts Differential Equations Numerical Methods Vectors in 3 dimensions. Mechanics: Equations of Projectiles Mechanics: Frictional forces and motion Mechanics: Forces acting at an angle Mechanics: Moments Statistics: Conditional probability Statistics: Normal Distribution Statistics: Hypothesis testing <p>The assessment for A-Level maths consists of 3 papers, Pure and Mechanics, Pure and Statistics (where there is some pre-release material of a large data set). The third paper is a pure and comprehension paper, this tests the pupils ability to use their mathematical knowledge in an unfamiliar situation.</p> <p>These skills students develop are all required for the A-Level specification, and are outlined in the document found here: https://www.ocr.org.uk/Images/308740-specification-accredited-a-level-gce-mathematics-b-mei-h640.pdf the teachers here at QM might well extend these skills to test pupils knowledge and integrity so that they are thoroughly prepared for examinations</p>
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After the end of year exams, which usually happen in May/June, we then move forward to working through the Year 2 content.

The topics that are studied before the end of the year are:

Partial fractions

Sequences and Series

General binomial expansion

Radians

Modulus functions

Composite Functions

Year 12 Further Maths

In year 12 we cover 90% of the pure topics, excluding the numerical methods, and the mechanics and statistics sections of the Year 2 course (which can be found in the year 13 section of maths).

In addition to the vast majority of the A-level course being taught in year 12, we also teach the year 1 further maths core content.

This covers the following topics

Introduction to Matrices

Introductions to Complex numbers

Roots of polynomials

Proof

Vector equations

Standard summations results

Year 13 Further maths

This is taught by 4 teachers, covering the four topics for assessment:

The Core content accounts for 50% of the course, and the other *modules* are 16.6% each.

Numerical Methods

- Numerical approximations
- Approximating functions
- Numerical solutions
- Numerical Integration
- Numerical Differentiation
- Interpolating polynomials
- Rates of convergence

Mechanics minor

- Forces of rigid bodies
- Work-Energy Principle
- Power
- Impulse and Momentum
- Centres of mass

Statistics minor

- Discrete distributions, inc. Poisson distribution
- Continuous distributions
- Regression analysis
- Chi-Squared test
- Further Hypothesis tests.

Core content.

- Further Matrices
- Further Complex numbers
- Advanced Integration Skills
- Polynomial approximations Maclaurin Series

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		<ul style="list-style-type: none"> • Polar co-ordinates and integration • Hyperbolic Trug functions • Further Differential Equations • Second order Differential Equations • Systems of Differential Equations • Vectors and 3D space <ul style="list-style-type: none"> • The work covered can be found here https://ocr.org.uk/Images/308768-specification-accredited-a-level-gce-further-mathematics-b-mei-h645.pdf
<p>Philosophy</p>	<p>Everything set forth in the relevant A Level Syllabus (knowledge and skills) to a level of competence that allows prediction of the eventual grade; and including:</p> <ol style="list-style-type: none"> 1. PHL.101 Reality; <ol style="list-style-type: none"> a. the nature of reality; b. the nature and problems of perception; c. the nature of death and the possibility of post-mortem existence; d. the nature and problems of knowing things e. logical and rhetorical skills, including validity, soundness, fallacy, truth-conditions, necessity and sufficiency; 2. PHL.102 God <ol style="list-style-type: none"> a. The nature of God b. The existence of God c. Paradox and logic; analogy; the role of evidence d. The nature of the concept of time; the ontology and metaphysics of time, specifically how a being such as God is related to "Time"; 3. PHL.103 Mind 	<ol style="list-style-type: none"> 11. PHL.201 Mill <ol style="list-style-type: none"> a. the extent and scope of utilitarianism; b. criticisms of utilitarianism; 12. PHL.202 Evil <ol style="list-style-type: none"> a. The problem of evil solutions, including complex theodicies and modern responses. 13. PHL.203 Knowledge II <ol style="list-style-type: none"> a. The meditations 14. PHL.204 Kant <ol style="list-style-type: none"> a. Categorical and consequentialist morality; b. Kantian ethics c. Lying and simulated killing 15. PHL.205 Zombies <ol style="list-style-type: none"> a. Dualism and physicalism; b. the nature of mentality and the mind; c. personal consequences of each theory; 16. PHL.206 Gettier II <ol style="list-style-type: none"> a. Responses to Gettier 17. PHL.207 Morals III <ol style="list-style-type: none"> a. Virtue Ethics 18. PHL.208 Language <ol style="list-style-type: none"> a. Metaethics - what kind of things are ethical properties? How can we talk meaningfully about moral situations and ideas?

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- a. Substance;
- b. Regress;
- c. the nature of death and survival;
- d. the nature of personhood;
- e. the nature and existence of the mind, and common-sense (pre-philosophical) justifications of substance dualism.

4. PHL.104 Morals

- a. Is it safe to be gay in the UK?
- b. Moral relevance;
- c. utilitarianism
- d. Justice
- e. Legality, jurisprudence;
- f. presentation and oracy skills;
- g. Psychological underpinnings of morality and society;
- h. Metaethics;
- i. Virtue Ethics

5. PHL.105 Reality II

- a. Descartes;
- b. Solipsism, relativism, subjectivism, realism;
- c. Cosmological arguments;
- d. Ethics: stealing and lying;
- e. Writing lengthy essays;

6. PHL.106 God II

- a. The nature of God and the logic of the concept of God;
- b. Arguments for His existence, including further versions of ontological arguments.

7. PHL.107 Knowledge

- a. The rationalist/empiricist dichotomy;

- b. Religious language - can we make any meaningful statements about God? Is truth possible?

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	<ul style="list-style-type: none"> b. Design Arguments 8. PHL.108 Morals II <ul style="list-style-type: none"> a. Utilitarianism b. Virtue Ethics c. Criticisms of ethical theories and metaethics 9. PHL.109 Mind II <ul style="list-style-type: none"> a. What is the mind? b. Does the mind exist? c. Theories of personhood 10. PHL.110 Gettier <ul style="list-style-type: none"> a. What is knowledge? Is It justified true belief? b. Necessary and sufficient conditions of x. 	
<p>Physics</p>	<ol style="list-style-type: none"> 1. Measurements and their errors <ul style="list-style-type: none"> • SI Units • Errors and estimation • Year 12 Practical 2. Particles and Radiation <ul style="list-style-type: none"> • Standard Model of Particle Physics • Particle interactions and decays • Quantum Phenomena 3. Waves <ul style="list-style-type: none"> • Progressive and Stationary Waves • Refraction, diffraction, interference 4. Mechanics and Materials <ul style="list-style-type: none"> • Statics • Kinematics • Force, Energy and Momentum • Materials 5. Electricity <ul style="list-style-type: none"> • Direct Current Electricity 	<ol style="list-style-type: none"> 1. Measurements and their errors <ul style="list-style-type: none"> • Year 13 Practical 6. Further Maths and Thermal Physics <ul style="list-style-type: none"> • Circular Motion • Simple Harmonic Motion • Gas Laws • Molecular Kinetic Theory 7. Fields <ul style="list-style-type: none"> • Electric Fields • Gravitational Fields • Capacitance • Magnetic Fields • Electromagnetic Induction 8. Nuclear Physics <ul style="list-style-type: none"> • Radioactivity • Nuclear Instability • Nuclear energy • Fission and Fusion 9. Turning Points in Physics

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	<ul style="list-style-type: none"> • Circuit rules • EMF and Internal Resistance 	<ul style="list-style-type: none"> • Discovery of the Electron • Wave-particle duality • Special Relativity
PSHEE	<p><u>Relationships, Sex & Health Education</u></p> <ul style="list-style-type: none"> • Introduction to KS5 PSHE • Introduction to Transactional Analysis • Managing unwanted attention • Pressure, persuasion and coercion • Addressing relationship abuse • Managing relationship conflict and breakups <p><u>Careers & Finance</u></p> <ul style="list-style-type: none"> • Job-seeking • Choosing financial products • Seeking financial advice <p><u>Media Literacy</u></p> <ul style="list-style-type: none"> • How can we manage impulses and influences to gamble? • Online blackmail • Talk it over <p><u>Physical Health & Mental Wellbeing</u></p> <ul style="list-style-type: none"> • Self-examination, donation, immunisation and vaccination • A fair and equal opportunity to be healthy • Help-seeking and sources of support <p><u>Diversity & Citizenship</u></p> <ul style="list-style-type: none"> • Conflict resolution 1 • Conflict resolution 2 • Conflict resolution 3 	<p><u>Relationships, Sex & Health Education</u></p> <ul style="list-style-type: none"> • Creating safe spaces • Communication, consent and choice • Sexual norms and expectations • Pleasure and sensuality • Contraception and Sexually Transmitted Infections (STIs) • Parenting <p><u>Careers & Finance</u></p> <ul style="list-style-type: none"> • Getting started in the workplace • The financial implications of work • Workplace professionalism <p><u>Media Literacy</u></p> <ul style="list-style-type: none"> • Helping people who have developed problems with gambling • Online sexual harassment • Online identity <p><u>Physical Health & Mental Wellbeing</u></p> <ul style="list-style-type: none"> • First Aid • Factors that influence health and wellbeing • Living independently <p><u>Diversity & Citizenship</u></p> <ul style="list-style-type: none"> • Conflict resolution 4 • Conflict resolution 5 • Conflict resolution 6
Psychology	<p>Everything set forth in the relevant A Level Syllabus (knowledge and skills) to a level of competence that allows prediction of the eventual grade; and including:</p> <ol style="list-style-type: none"> 1. PSY.101 Introduction; 	<ol style="list-style-type: none"> 8. PSY.200 The Brain & the Mind; <ol style="list-style-type: none"> a. Milgram b. Anatomy of the Brain c. Ways of studying the brain d. Split-brains

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	<ul style="list-style-type: none"> a. Freud b. Skinner c. Phobias and Fear d. Fight and Flight e. Alpha and beta bias f. Research methods <ul style="list-style-type: none"> i. Content analysis ii. Designing studies iii. Self-reports g. The Stanford Prison Study <ul style="list-style-type: none"> i. Hawthorne Effect ii. Ethics iii. Demand characteristics 2. PSY.102 (Memory) <ul style="list-style-type: none"> a. Theories of memory, including theories of forgetting; b. Eye-witness testimony; c. Anxiety; 3. PSY.103 (Psychopathology) <ul style="list-style-type: none"> a. Humanism: self-concept, self-esteem; b. Maslow and Rogers; c. Disorders, including depression and bipolar disorder, and treatments (including CBT) d. Case Study of Edmund Kemper <ul style="list-style-type: none"> i. The effect of upbringing and the nature/nurture debate; ii. Aggression, including the role of testosterone; iii. Robbers' Cave, and social psychology; e. Bowlby's attachment theory f. Bobo Doll Study, and the influence of others; 	<ul style="list-style-type: none"> e. Cultural bias and the emic/etic distinction f. Schizophrenia g. Conformity 9. PSY.201 Disorders <ul style="list-style-type: none"> a. Personality b. Depression c. OCD d. CBT and therapy 10. PSY.202 Attraction <ul style="list-style-type: none"> a. Theories of attraction and mate preference; b. Evolution 11. PSY.203 Resistance <ul style="list-style-type: none"> a. How to resist influence of all kinds: social and biological 12. PSY.204 Biopsychology <ul style="list-style-type: none"> a. The interaction of the brain and the mind, b. The nervous system c. Endogenous pacemakers and exogenous zeitgebers, and the effects of biology on psychology 13. PSY.300 Research Methods <ul style="list-style-type: none"> a. Scientific method b. Scientific methodology in the context of social science c. Issues of collection, presentation, interpretation and analysis of data; d. Case studies and questionnaires; e. Ethical issues; f. Statistics and general mathematical skills (e.g. standard deviation, correlations) g. Observational studies; h. Validity and reliability; i. The impact of psychological research on the economy
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	<ul style="list-style-type: none"> g. Schizophrenia h. Free Will 4. PSY.104 (Aggression) <ul style="list-style-type: none"> a. Theories of aggression, b. Evolution of aggression, and sex differences; c. Aggression in prisons, and the stanford prison study; d. Bystander effects; e. The Lucifer Effect; Frustration f. Twin Studies and genetics 5. PSY.105 (Human Relationships) <ul style="list-style-type: none"> a. Sex and attraction b. Evolution c. Intimacy d. Theories of attraction e. Stress 6. PSY.106 (Issues and Debates) <ul style="list-style-type: none"> a. Nature/nurture b. Bias c. Free will/determinism 7. PSY.107 (Approaches) <ul style="list-style-type: none"> a. Psychodynamics b. Humanism c. Behaviourism d. Biopsychology e. Social Learning Theory 	
<p>Spanish</p>	<p>Aspects of Hispanic-speaking Society</p> <ul style="list-style-type: none"> • <u>Traditional and Modern Values</u> - Changing family life/ marriage and divorce/Influence of church • <u>Cyberspace</u>– Good and bad of internet/ 	<p>Multiculturalism in Hispanic Society</p> <ul style="list-style-type: none"> • <u>Immigration</u> – Positives + negatives/Hispanic World/Illegal immigrants’ problems • <u>Racism</u>– Attitudes/opposing racism/legislation

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	<ul style="list-style-type: none"> Smartphones/Social networks – pluses + minuses <u>Gender Equality</u> – Women in Work/Chauvinism and feminism/ LGBT rights + gay marriage <p>Artistic Culture</p> <ul style="list-style-type: none"> <u>Influence of Idols</u> – Singers and Musicians/TV and cinema stars/Fashion models <u>Regional Identity</u> – Customs and traditions/ Gastronomy/Languages <u>Cultural Heritage</u> – Pre-historic Spain and America/Artists and architecture/Music <u>Cultural Topic</u> - La Casa de Bernarda Alba - play 	<ul style="list-style-type: none"> <u>Integration</u> – Integration/education/religions <p>Political Life in the Hispanic World</p> <ul style="list-style-type: none"> <u>Citizens of Tomorrow</u> – Youth and politics/Unemployment/Ideal Society <u>Monarchies and Dictatorships</u> – Franco/Transition to Democracy/Latin American dictators <u>Popular movements</u> – Strikes/unions/Social protests <u>Cultural Topics</u> – Play - La Casa de Bernarda Alba Film – EL Laberinto del fauno <u>Independent Research Topic</u> – oral exam <p>Listening, reading, writing and speaking skills covered weekly</p>
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Mercian MAT Subjects

<p>Ancient History</p>	<p>An A Level in Ancient History will allow you to study the ancient world, its momentous events and its larger-than-life personalities, including: Alexander the Great, Caligula and King Leonidas of Sparta. You will see how ancient civilisations like the Romans, Greeks and Egyptians have shaped the world that we live in today and develop a passion and curiosity for antiquity. The course will also allow you to gain a greater understanding of the literature of the period, including the first great historians like Herodotus, Thucydides and Livy.</p>
<p>Drama & Theatre Studies</p>	<p>Drama and Theatre studies is a challenging subject suited to students who are creative, questioning and observant. Students who enjoy reading and watching plays, taking part in them; acting and directing will find this course extremely stimulating and rewarding. Group work and collaboration is at the heart of this course and students learn through experience, seeing theatre and making theatre for themselves. It is a varied course with students studying a wide range of theatrical styles, plays, practitioners and theatre conventions; learning about approaches to theatre and applying knowledge to practical and theoretical components.</p> <p>The teachers in the Drama department are experienced and work to encourage students to become independent learners; a learner who is self-motivated, disciplined and confident. During the course you will develop your acting skills, take part in workshops and develop your understanding of ‘The Art of Performance’. You will also develop your writing skills as you critically analyse scripts and performances over the duration of the two years.</p> <p>Skills: Pupils of Drama will develop skills such as: Knowledge and understanding of a range of practical drama skills including:</p> <ul style="list-style-type: none"> Acting: Directing: Costume: Set designing: Technical design Understanding of the major theatrical styles Performance techniques – interpretation, voice, physicality, stage relationships with others

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- Collaborative skills with others to present a performance piece
- Communication and problem-solving skills
- Design skills – interpretation, visual and design impacts and set creation
- Technical abilities – lighting and sound design, special effects, technology and appropriate equipment
- Practical skills – from making masks and building sets to creation of period style and make-up
- Confidence, team-building, communication and other life skills.

There will be the opportunity to devise original work, develop understanding of how plays relate to historical, social and cultural context and consider the connections between theory and practice. In addition to Drama lessons students will go and see a number of live performances, access online Digital theatre shows and have the opportunity to work with a Theatre Company in a workshop context.

There are three components to the A-level:

Unit 1: Drama and Theatre:

This unit prepares you for the final written examination and during this module you will develop understanding of the theatrical processes and practices involved in interpreting and performing theatre, how conventions, forms and techniques are used in drama and live theatre to create meaning and how creative and artistic choices influence how meaning is communicated to an audience. Using a practical approach, you will learn how style, genre, form, structure, language, stage directions and character construction are used and applied to convey meaning and how performance texts are informed by their social, cultural and historical contexts and are interpreted and performed for an audience. Students will analyse and critique live theatre during the course and apply knowledge and understanding of theatre to interpret two set texts from either a performance or director perspective.

Our set texts are:

- 'A Servant to Two Masters' by Carlos Goldoni: A Commedia Dell'Arte style play, expect huge laughs and lively fun from this physical, energetic comedy.
- 'Our Country's Good' by Timberlake Wertenbaker: A play that is set in the 1780's and explores the relationships between a group of Royal Marines who have been sent over to Australia and the convicts they have been sent over with.

Unit 2: Creating Original Drama:

Students learn how to create and develop original devised ideas to communicate meaning as part of the theatre making process. You will develop ideas, research relevant processes and theatre practices, apply what you have learnt from live performances, explore devising work, rehearsal methods and refine work in progress. You will study the work and methodology of one influential practitioner and apply working methods, principles, artistic intentions, style and conventions of this practitioner to your final piece. The assessment also includes preparatory and development work, shown through a working notebook.

Unit 3: Making Theatre:

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	<ul style="list-style-type: none"> You will learn how to contribute to text-based drama in a live theatre context for an audience. Working in groups to develop and present three extracts from three different plays. You will learn how to interpret texts, create and communicate meaning, realise artistic intention in text-based drama, analyse and evaluate your own work. The third extract must be influenced by the methodology and practises of an influential Practitioner, Director, Theatre Company or Designer (different to the one studied in the devised module). You will develop understanding and knowledge of the connections between theory and practice in a range of periods, theatrical styles, social, historical and cultural contexts. A reflective report is also submitted which documents, analyses and evaluates the theatrical interpretation of all three extracts.
German	<p>Paper 1 Listening / Reading / Writing. Aspects of German-speaking society Artistic culture in the German-speaking world Multiculturalism in German-speaking society Aspects of political life in German-speaking society Grammar</p> <p>Paper 2 is a written paper assessing: One text and one film or two texts from the list set in the specification Grammar</p> <p>Paper 3 is the Speaking Test with Stimulus Card material followed by a more general conversation assessing: Individual research project One of four sub-themes i.e. aspects of German speaking society or artistic culture in the German speaking world or multiculturalism in German speaking society or aspects of political life in German speaking society.</p> <p>The course builds upon and develops the skills of speaking, listening, reading and writing which have been acquired in GCSE work. An important difference is that the subjects concentrate not on basic transactional language but on wider social, political, economic and cultural issues. The course will develop not only skills, but also understanding of the grammatical systems of the languages studied; and give a better insight into the way of life, history, geography, political system, economic life and customs of countries where the languages are spoken. Students may also have the opportunity to study the literature of the country and where possible to visit the theatre, cinema or watch video and on-line material. Furthermore, experience of a working environment using languages is underlined by the possibility of a programme of work experience in Europe for Year 12 students and/or a study tour in the Summer</p> <p>Topics include aspects of daily life, leisure and entertainment, communication, media and popular culture.</p>
Music	Over the two year course students cover Listening, Composing and Performing in three units

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	<p>Subject Content: The course offers a variety of alternatives which enable students to submit work demonstrating their strengths in the subject. There are three units of study. External assessments take place in May of Year 13. In units 1 and 2 Students may opt for Option A or B. This flexibility means they can gain up to 35% in the option for higher study and 25% in the option where they choose the smaller amount of study.</p> <p>Unit 1: Performing (35% or 25%) Here students have the opportunity to perform both as a soloist and in ensembles. Performances can take place on any instrument, including voice. A recital is prepared for Year 13 and should last either for six to eight minutes (Option A) or twelve to fifteen minutes (Option B)</p> <p>Unit 2: Composing (25% or 35%) Students are required to compose two pieces. One from a brief set by the board and one working from their own brief. For option A, an extension to their composing comprises of four-part harmony and two-part counterpoint.</p> <p>Unit 3: Listening and Appraising (40%) This work is undertaken through the study of four areas. Areas 1 and 2 are compulsory and a further two are selected from areas 3-6. They are 1: Instrumental Music of Haydn, Mozart and Beethoven 2: Popular Song: Blues, Jazz, Swing and Big Band 3: Developments in Instrumental Jazz from 1910 to the present day 4: Religious Music of the Baroque period 5: Programme Music 6: Innovations in Music 1900 to the present day</p>
<p>Photography</p>	<p>Photography at A level is an Art and Design based course.</p> <p>Component 01: Personal investigation: During the personal investigation you will produce two elements: 1. A portfolio of practical work showing your personal response to either a starting point, brief, scenario or stimulus, devised and provided by you or your staff. 2. A related study: an extended response of a guided minimum of 1000 words.</p> <p>Component 02: Externally-set task</p>

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	<p>The early release paper will be issued to you by your staff from the exam board and will provide you with a number of themes, each with a range of written and visual starting points, briefs and stimuli.</p> <p>During the course you also study a range of themes to extend your photographic horizons. These include topics such as:</p> <ul style="list-style-type: none"> • Portraiture • Landscape photography • Commercial photography • Still-life photography • Documentary photography • Experimental imagery • Editorial photography • Photographic installation • The photographic process • Moving image • Animation Textile Design <p>Assessment:</p> <ul style="list-style-type: none"> • Personal investigation (01) - 120 marks non exam assessment (internally assessed and externally moderated) this will be 60% of total A level • Externally set task (02) 80 marks - 15 hours non exam assessment.
<p>Physical Education</p>	<p>Three units (units 1,2 and 3) are assessed by exam and marked by OCR (70% of qualification). The final unit is coursework based which is internally assessed by teachers and externally moderated by OCR. This section requires performance or coaching in a selected sport and a verbal evaluation of performance and action plan to improve (30% of qualification)</p> <p>You will study four units that are all mandatory.</p> <ul style="list-style-type: none"> • Physiological factors affecting performance • Psychological factors affecting performance • Socio-cultural issues in physical activity and sport • Performance in physical education <p>These units will give you an understanding of sport in the wider contexts of coaching and leadership, anatomy and physiology, the body's short and long term responses to physical activity, the framework of sport in the UK and the organisations involved and the psychological challenges that sport can provide. You will also develop transferable skills such as planning, communication, adaptability and leadership.</p>
<p>Politics</p>	<p>Subject Content:</p> <p>Unit 1: Government and Politics of the UK People, Politics and Participation: An introduction to the political world: Why do people vote? Who do they vote for? How do elections work? Why do people take part in political protests? Governing Modern Britain How is Britain governed? How are laws made? Who holds the real power in this country?</p> <p>Unit 2: Government and Politics of the USA Politics of the USA This unit looks at how Politics in the USA is conducted. How is the President elected? What is the difference between a Primary and a Caucus? Why do Republicans and Democrats dominate? How much power do pressure groups in the USA wield?</p>

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Government of the USA

How is the USA governed? What is the difference between a senator and a governor? How much power does the president really have? What is the constitution?

Unit 3: Political Ideas

Students study 4 ideologies including the 3 core ideologies of liberalism, conservatism and socialism. They will also study one non-core ideology, Nationalism.