



## Queen Mary's Grammar School

### Year 11 Mock Examination Revision Lists

<b>Maths</b>	<ul style="list-style-type: none"><li>• Simplifying expressions</li><li>• Rules of indices (including negative and fractional powers)</li><li>• Expanding up to 3 brackets</li><li>• Factorising expressions, including quadratics</li><li>• Algebraic fractions – adding, subtracting, multiplying, dividing and solving equations</li><li>• Angles between parallel lines and in triangles, quadrilaterals and polygons</li><li>• Congruent triangles</li><li>• Similar shapes, including areas and volumes</li><li>• Averages, Interquartile range and box plots</li><li>• Histograms</li><li>• Comparing data</li><li>• Fractions and percentages</li><li>• Decimal calculations, including recurring decimals</li><li>• Rearranging formulae</li><li>• Functions – including composite and inverse</li><li>• Algebraic identities</li><li>• Areas of 2D shapes</li><li>• Transformations of shapes – translations, rotations, reflections, enlargements (including negative and fractional scale factors)</li><li>• Probability – Venn and tree diagrams</li><li>• Estimation</li><li>• Upper and lower bounds, error intervals, limits of accuracy</li><li>• Solving linear equations</li><li>• Solving quadratic equations by factorising, completing the square or the quadratic formula</li><li>• Simultaneous equations (including quadratics)</li><li>• Area of a circle</li><li>• Arcs and sectors</li><li>• Circle theorems</li><li>• Approximate solutions to equations by trial and improvement or iteration</li><li>• Linear and quadratic inequalities</li><li>• Constructions and loci</li><li>• Pythagoras' theorem in 2D</li><li>• Trigonometry – SOHCAHTOA, sine rule, cosine rule, area of a triangle, exact values for 30,4,5,60</li><li>• Ratio and proportion</li><li>• Factors and multiples</li><li>• Surds – simplifying and rationalising the denominator</li><li>• Equation of a straight line</li><li>• Parallel and perpendicular lines</li><li>• Properties of quadratic functions</li></ul>
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	<ul style="list-style-type: none"> <li>• Kinematic graphs</li> <li>• 3D solids – prisms, cones, pyramids and spheres</li> <li>• Cumulative frequency graphs, box plots, scatter graphs, correlation</li> <li>• Standard form</li> <li>• Cubic and reciprocal graphs</li> <li>• Exponential functions and circles</li> <li>• Gradients and areas under graphs</li> </ul>
<b>English Language</b>	<p><b><u>Component 2</u></b></p> <ul style="list-style-type: none"> <li>• Reading and writing non-fiction</li> <li>• Unseen extracts from 19th and 21st Centuries</li> <li>• Two transactional writing tasks: speech/review/article/report/leaflet/informal and formal letters</li> <li>• Read and write in these areas of knowledge</li> <li>• Use the knowledge organisers provided by staff: synthesis, comparison, evaluation etc.</li> <li>• Know forms and conventions of each genre mentioned above</li> <li>• Know the timings of each section and question requirements</li> <li>• Familiarise yourself with mark schemes/examiners' reports</li> <li>• Be mindful of SPAG weaknesses and practise to improve</li> </ul>
<b>English Literature</b>	<p><b><u>Component 1 Section A: Macbeth</u></b></p> <ul style="list-style-type: none"> <li>• Extract plus essay question on whole text</li> <li>• <u>Language/structural analysis</u> and knowledge of themes/characters for shorter task</li> <li>• Essay requires whole play awareness, language/structural analysis and knowledge of themes/characters; more open discussion whilst rooting this in evidence from the text.</li> <li>• Know about play script conventions</li> <li>• Learn banks of quotes on character and themes</li> <li>• No need for contextual references on either task</li> <li>• SPAG marks on essay task</li> <li>• Re-read the text; know it inside-out</li> </ul> <p><b><u>Component 2: Section A: Lord of the Flies</u></b></p> <ul style="list-style-type: none"> <li>• Extract based question with links to wider text</li> <li>• Knowledge of language/structure/characters/themes applied to extract and whole text</li> <li>• Know about novelistic conventions</li> <li>• Use the extract for ready source of quotable material</li> <li>• Learn banks of quotes on character and themes</li> <li>• No need for contextual references</li> <li>• SPAG assessed</li> <li>• Re-read the text; know it inside-out</li> </ul>
<b>Biology</b>	<ul style="list-style-type: none"> <li>• Cell biology</li> <li>• Organisation</li> <li>• Infection and response</li> <li>• Bioenergetics</li> <li>• Homeostasis and response</li> </ul>
<b>Chemistry</b>	<ul style="list-style-type: none"> <li>• Atomic structure and the periodic table</li> <li>• Bonding, structure, and the properties of matter</li> <li>• Quantitative chemistry</li> <li>• Chemical changes</li> <li>• Energy changes</li> <li>• The rate and extent of chemical change</li> </ul>
<b>Physics</b>	<ul style="list-style-type: none"> <li>• Energy</li> </ul>

	<ul style="list-style-type: none"> <li>• Electricity</li> <li>• Particle Model of Matter</li> <li>• Atomic Structure</li> <li>• Forces</li> </ul>
<b>Religion, Philosophy and Ethics</b>	<ul style="list-style-type: none"> <li>• Worship</li> <li>• The Sacraments: Baptism</li> <li>• Salah: the daily prayers</li> <li>• The nature of God</li> <li>• God as omnipotent, loving and just</li> <li>• Arguments against the existence of God</li> <li>• The Oneness of God and the Supremacy of God's Will</li> <li>• Different ideas about the Divine</li> <li>• Sin and Salvation</li> <li>• Special revelation and enlightenment</li> <li>• General Revelation</li> <li>• The value of revelation and enlightenment</li> <li>• Muhammad and the Imamate</li> <li>• The status and roles of women</li> <li>• The First Cause Argument</li> <li>• The Design Argument</li> <li>• The Argument from Miracles</li> <li>• Christian teachings about human sexuality</li> <li>• Sexual relationships before and outside marriage</li> <li>• Human sexuality</li> <li>• The Incarnation and Jesus, the Son of God</li> <li>• Resurrection and life after death</li> <li>• The Afterlife and Judgment</li> <li>• Heaven and Hell</li> <li>• The Role of Christ in Salvation</li> <li>• Key Beliefs of Sunni Islam and Shia Islam</li> <li>• Angels</li> <li>• Life after Death</li> <li>• Prophethood and Adam</li> <li>• Jihad</li> <li>• The festival of Ashura</li> <li>• Death and the Afterlife</li> <li>• The Crucifixion</li> <li>• The Resurrection and Ascension</li> <li>• Giving money to the poor</li> <li>• The Five Pillars, the Ten Obligatory Acts and the Shahadah</li> <li>• Crime and punishment</li> <li>• Introduction to Crime and Punishment</li> <li>• Three aims of punishment</li> <li>• Lawbreakers and different types of crime</li> <li>• Christian attitudes to the treatment of criminals</li> <li>• Christian attitudes to forgiveness</li> <li>• Forgiveness</li> <li>• Christian attitudes to the death penalty</li> <li>• The Death penalty</li> </ul>

	<ul style="list-style-type: none"> <li>• Social justice and human rights</li> <li>• Social Justice</li> <li>• Ibrahim</li> <li>• Hajj: Pilgrimage</li> <li>• Religious teachings about the nature and purpose of families in the 21st century</li> <li>• The nature and purpose of families</li> <li>• The Oneness of God and the Trinity</li> <li>• Christian teachings about marriage</li> <li>• Marriage</li> </ul>
<b>Art</b>	<p><i>In preparation for the mock art exam, the following need to be complete and handed in at the start of the exam;</i></p> <ul style="list-style-type: none"> <li>• Initial observations board with initial ideas for chosen theme.</li> <li>• Completed first artist board with clear title, detailed annotations, images of the artist's work, an artist copy and your own artist response.</li> <li>• Second artist title, detailed annotations, images of the artist's work and artist copy ready to be mounted onto your board.</li> </ul> <p><i>During the mock exam, you will be expected to complete your second artist response. Planning and preparation for this needs to be organized ready for the start of the exam.</i></p>
<b>Business</b>	<p><i>You will sit one examination which will cover Theme 1</i></p> <ul style="list-style-type: none"> <li>• <b>Topics 1.1 – 1.5 [You are advised to make use of your topic checklists to identify key areas for revision]</b></li> <li>• The examination paper will be 1 hour and 30 minutes.</li> <li>• The paper is divided into three sections: Section A: 35 marks      Section B: 30 marks      Section C: 25 marks.</li> <li>• The paper will consist of calculations, multiple-choice, short-answer and extended-writing questions.</li> <li>• Questions in Sections B and C will be based on business contexts given in the paper.</li> <li>• Calculators may be used in the examination.</li> </ul>
<b>Computer Science</b>	<ul style="list-style-type: none"> <li>• SLR1.1      -      Systems Architecture</li> <li>• SLR1.2      -      Memory</li> <li>• SLR1.3      -      Storage</li> <li>• SLR1.4      -      Wired and Wireless</li> <li>• SLR1.5      -      Network Topologies, Protocols and Layers</li> <li>• SLR1.6      -      System Security</li> <li>• SLR2.1      -      Algorithms</li> <li>• SLR2.2      -      Programming Techniques</li> </ul>
<b>Design and Technology</b>	<ul style="list-style-type: none"> <li>• Ergonomics and anthropometrics</li> <li>• Core Content: Textiles</li> <li>• Core Content: Electronic Systems</li> <li>• Core Content: Polymers</li> <li>• Core Content: Metals and alloys</li> <li>• Core Content: Papers and boards</li> <li>• Core Content: Timber and manufactured board</li> <li>• ENERGY: Sources, renewable and non-renewable, portable. Advantages and disadvantages of different types of energy</li> <li>• FORCES: What forces can exist with a structure (tension, compression, shear, torsion etc)</li> <li>• New materials: eg. Kevlar – Properties and uses</li> <li>• Cutting tools: What tools are used for cutting materials?</li> <li>• Manufacturing processes: ADDITION/FABRICATION, WASTING and REDISTRIBUTION</li> <li>• Primary Source of materials</li> <li>• Conversion of materials from source material to usable materials in industry.</li> <li>• JIT production: Advantages and disadvantages</li> </ul>

	<ul style="list-style-type: none"> <li>• The 6 Rs (Reuse, Reduce, Recycle, Repair, Refuse and Rethink)</li> <li>• Aesthetics: How aesthetics can influence the choice of materials and the quality of the overall product</li> <li>• Material finishes: Surface treatment. Why do materials need surface treatment or a finish applied?</li> <li>• Different surface finishes for woods, metals and plastics. How applied?</li> <li>• Properties and characteristics of common materials. Physical and mechanical properties.</li> <li>• Modifying materials: Alloys, composite, heat treatment, polymer additives, GLULAM</li> <li>• <b>Production aids:</b> jigs, templates, formers, moulds</li> <li>• <b>PRODUCTION AIDS:</b> How are they used to assure quality and aid repetition?</li> <li>• Maths: Area and volume calculations for basic geometric shapes</li> <li>• Maths: Nesting and tessellation of geometric shapes</li> <li>• Minimising waste when cutting material</li> <li>• Why is research important? Primary v secondary research?</li> <li>• Why is product analysis important in the designing and developing products?</li> <li>• Designers and their products: Know at least one designer and some of his famous iconic products</li> <li>• Understand how designers get inspiration for products</li> <li>• Understand the different materials used by at least one designer in their products</li> <li>• Understand the different technology used by at least one designer in their products</li> <li>• SMART, composite, compliant and new/modern materials</li> <li>• Natural and synthetic materials</li> <li>• Primary source of materials</li> <li>• Reinforcing and strengthening materials</li> <li>• Available stock form of different materials</li> <li>• Properties and characteristics of materials</li> <li>• Sustainability, environmental issues and the 6Rs</li> <li>• Use of models in the design process</li> <li>• The materials most commonly used when making models to explore design ideas</li> <li>• <b>Computer based tools</b> to aid designers: CAD, CAM, CNC, VI (Virtual Reality) etc</li> <li>• How do designers use the computer in designing and developing products?</li> <li>• Advantages and disadvantages of using computers when designing?</li> <li>• The iterative design process: How to develop a product by using models and research.</li> <li>• QA and QC: Quality Assurance and Quality Control.</li> <li>• How a professional designer works? How a professional engineer works? Collaboration? Use of computers.</li> </ul> <p><b>Sources of Revision</b></p> <ul style="list-style-type: none"> <li>• Text Book: "D&amp;T – All Material Categories and Systems"</li> <li>• Website: <a href="http://www.technologystudent.com">www.technologystudent.com</a></li> <li>• Text Book: Chapter 5 pages 350-356 "The Written Paper"</li> <li>• Text Book: "Core Technical Principles" pages 2-69...you must read and know all of this content</li> <li>• Product Analysis: Study materials, components and manufacturing methods used in products in the home</li> <li>• Twitter: @QMGSDT</li> </ul> <p><b>Revision Books:</b> The DT department have a limited supply of revision guides for the AQA D&amp;T course. These retail at £10.99 in the shops. They are available to schools at £5. See PRH if you are interested.</p> <p><b>Revision Cards:</b> The DT department also has a limited supply of revision cards for the AQA D&amp;T course. They are available at £4.50. See PRH if interested.</p>
<b>French</b>	<ul style="list-style-type: none"> <li>• <b>Vocabulary base</b> Modules 1-12 Foundation pages of textbook Modules 1-7 Higher pages of textbook</li> <li>• <b>GRAMMAR – see Pages 176-200 of textbook</b></li> <li>• <b>VERBS:</b> These types of verb (ER/IR/RE/reflexives/irregulars/impersonal) in the following tenses: 1. present</li> </ul>

	<ol style="list-style-type: none"> <li>2. immediate future</li> <li>3. perfect</li> <li>4. imperfect</li> <li>5. future</li> <li>6. conditional</li> <li>7. pluperfect</li> </ol> <ul style="list-style-type: none"> <li>• Use and meaning of Infinitives – Two-verb constructions/Commands En + present participle Faire + infinitive</li> <li>• <b>OTHER</b> Adjectives – position/comparatives/superlatives/possessives/démonstratives Adverbs Articles – definite/indefinite/partitive Pronouns – reflexive/subject/direct object/indirect object/demonstrative/emphatic Questions Negative words Prepositions Conjunctions/time phrases/opinions – all in Key phrases booklets</li> </ul>
<b>Geography</b>	<ul style="list-style-type: none"> <li>• UK Physical Landscapes</li> <li>• Changing Economic World</li> <li>• Challenge of Natural Hazards</li> <li>• Urban Issues and Challenges</li> </ul>
<b>History</b>	<p><b>AQA 3.2 Understanding the modern world.</b></p> <p><b>3.2.1 Section A: Period studies</b></p> <p><b>AB Germany, 1890–1945: Democracy and dictatorship:</b> <i>This period study focuses on the development of Germany during a turbulent half century of change. It was a period of democracy and dictatorship – the development and collapse of democracy and the rise and fall of Nazism. Students will study the political, economic, social and cultural aspects of these two developments and the role ideas played in influencing change. They will also look at the role of key individuals and groups in shaping change and the impact the developments had on them.</i></p> <p><b>Part one: Germany and the growth of democracy</b></p> <ul style="list-style-type: none"> <li>• Kaiser Wilhelm and the difficulties of ruling Germany: the growth of parliamentary government; the influence of Prussian militarism; industrialisation; social reform and the growth of socialism; the domestic importance of the Navy Laws.</li> <li>• Impact of the First World War: war weariness, economic problems; defeat; the end of the monarchy; post-war problems including reparations, the occupation of the Ruhr and hyperinflation.</li> <li>• Weimar democracy: political change and unrest, 1919–1923, including Spartacists, Kapp Putsch and the Munich Putsch; the extent of recovery during the Stresemann era (1924–1929): economic developments including the new currency, Dawes Plan and the Young Plan; the impact of international agreements on recovery; Weimar culture.</li> </ul> <p><b>Part two: Germany and the Depression</b></p> <ul style="list-style-type: none"> <li>• The impact of the Depression: growth in support for the Nazis and other extremist parties (1928–1932), including the role of the SA; Hitler’s appeal.</li> <li>• The failure of Weimar democracy: election results; the role of Papen and Hindenburg and Hitler’s appointment as Chancellor.</li> <li>• The establishment of Hitler’s dictatorship: the Reichstag Fire; the Enabling Act; elimination of political opposition; trade unions; Rohm and the Night of the Long Knives; Hitler becomes Führer.</li> </ul>

### **Part three: The experiences of Germans under the Nazis**

- Economic changes: benefits and drawbacks; employment; public works programmes; rearmament; self-sufficiency; the impact of war on the economy and the German people, including bombing, rationing, labour shortages, refugees.
- Social policy and practice: reasons for policies, practices and their impact on women, young people and youth groups; education; control of churches and religion; Aryan ideas, racial policy and persecution; the Final Solution.
- Control: Goebbels, the use of propaganda and censorship; Nazi culture; repression and the police state and the roles of Himmler, the SS and Gestapo; opposition and resistance, including White Rose group, Swing Youth, Edelweiss Pirates and July 1944 bomb plot.

**3.2.2 Section B: Wider world depth studies. Conflict and tension between East and West, 1945–1972:** *This wider world depth study enables students to understand the complex and diverse interests of different states and individuals and the ideologies they represented. It considers revolutionary movements during this time. It focuses on the causes and events of the Cold War and seeks to show how and why conflict occurred and why it proved difficult to resolve the tensions which arose during the Cold War. This study also considers the role of key individuals and groups in shaping change and how they were affected by and influenced international relations.*

### **Part one: The origins of the Cold War**

- The end of the Second World War: Yalta and Potsdam Conferences; the division of Germany; contrasting attitudes and ideologies of the USA and the USSR, including the aims of Stalin, Churchill, Roosevelt, Attlee and Truman; effect of the dropping of the atom bomb on post-war superpower relations.
- The Iron Curtain and the evolution of East-West rivalry: Soviet expansion in East Europe; US policies; the Truman Doctrine and Marshall Plan, their purpose and Stalin's reaction; Cominform; Comecon; Yugoslavia; the Berlin Blockade and Airlift.

### **Part two: The development of the Cold War**

- The significance of events in Asia for superpower relations: USSR's support for Mao Tse-tung and Communist revolution in China, and the military campaigns waged by North Korea against the UN and by the Vietcong against France and the USA.
- Military rivalries: the arms race; membership and purposes of NATO and the Warsaw Pact; the space race, including Sputnik, ICBMs, Polaris, Gagarin, Apollo.
- The 'Thaw': Hungary, the protest movement and the reforms of Nagy; Soviet fears, how they reacted and the effects on the Cold War; the U2 Crisis and its effects on the Paris Peace Summit and the peace process.

### **Part three: Transformation of the Cold War**

- Berlin Wall: reasons for its construction and Kennedy's response.
- Tensions over Cuba: Castro's revolution, the Bay of Pigs and the missile crisis: the roles of Castro, Khrushchev, Kennedy; fears of the USA and reaction to missiles on Cuba; dangers and results of crisis.
- Czechoslovakia: Dubcek and the Prague Spring movement; USSR's response to the reforms; the effects the Prague Spring had on East-West relations, including the Warsaw Pact; the Brezhnev Doctrine.
- Easing of tension: sources of tension, including the Soviets' record on human rights; the reasons for Détente and for SALT 1; the part played by key individuals Brezhnev and Nixon.

<b>Mandarin Chinese</b>	<p><i>The Chinese Mock exam covers the topics listed below. You will take the Reading and Writing Papers during the MOCK Exam. Listening Test will be conducted during a Chinese lesson. Please make sure you revise the GCSE vocabulary booklet and the Mock Preparation booklet.</i></p> <p><b>Theme 1: Identity and culture covers four topics with related sub-topics shown:</b></p> <ul style="list-style-type: none"> <li>• Topic 1: Me, my family and friends</li> <li>• Topic 2: Technology in everyday life - Mobile technology and internet</li> <li>• Topic 3: Free-time activities- Music /Cinema and TV /Food and eating out /Sport</li> <li>• Topic 4: festivals in Chinese-speaking countries/communities such as Chinese New Year and Mid-Autumn Festival</li> </ul> <p><b>Theme 2: Local, national, international and global areas of interest covers the following three topics with related sub-topics shown:</b></p> <ul style="list-style-type: none"> <li>• Topic 1: Home, town, neighbourhood and region</li> <li>• Topic 2: Travel and tourism</li> <li>• Topic 3: Protecting environment</li> </ul> <p><b>Theme 3: Current and future study and employment covers the following four topics:</b></p> <ul style="list-style-type: none"> <li>• Topic 1: My studies-school subjects / your school</li> <li>• Topic 2: Plan to study at university</li> <li>• Topic 3: Jobs and career choices</li> </ul>
<b>Music</b>	<ul style="list-style-type: none"> <li>• Bach's Brandenburg Concerto no. 5</li> <li>• Beethoven's 1st Movement Piano Sonata in C Minor</li> <li>• Purcell's Music For A While</li> <li>• Queen's 'Killer Queen'</li> <li>• Defying Gravity from Wicked</li> <li>• Star Wars main title theme from episode IV</li> <li>• Release by Afro Celt Sound System</li> <li>• Samba Em Preludio by Esperanza Spalding</li> </ul>
<b>Spanish</b>	<ul style="list-style-type: none"> <li>• <b>Vocabulary base</b> Modules 1-12 Foundation pages of textbook Modules 1-7 Higher pages of textbook</li> <li>• <b>GRAMMAR – see Pages 176-197 of textbook</b></li> <li>• <b>VERBS</b></li> <li>• These types of verb (AR/ER/IR/reflexives/stem-changing/impersonal/irregulars) in the following tenses: <ol style="list-style-type: none"> <li>1. present</li> <li>2. immediate future</li> <li>3. preterite</li> <li>4. imperfect</li> <li>5. perfect</li> <li>6. future</li> <li>7. conditional</li> <li>8. pluperfect</li> <li>9. present/imperfect continuous</li> </ol> </li> <li>• Use and meaning of Infinitives – Two-verb constructions/Commands</li> <li>• <b>OTHER</b> Adjectives – position/comparatives/superlatives/possessives/demonstratives Adverbs Articles – definite/indefinite Pronouns – reflexive/subject/direct object/indirect object/demonstrative/disjunctive Questions Negative words Prepositions Conjunctions/time phrases/opinions – all in Key phrases booklets</li> </ul>