

Subject Topic/Specification Summary

Subject: Combined Science

Biology – Exam Paper 1

Topic Overview:

Key Concepts: Cells, Enzymes, Transporting substances.

Growth and Cellular Control: Mitosis, Animal and Plant growth, Stem cells, Nervous system.

Genetics: Meiosis, DNA, Alleles, Mutation, Variation

Natural and Artificial Selection, Human evolution, natural selection, classification, selective breeding, Genetic engineering

Health and Disease: Non / Communicable diseases, Pathogens, Barriers, immune systems and antibiotics

Chemistry – Exam Paper 2

Topic Overview:

Key Concepts in Chemistry: Formulae, equations, hazards, atomic structure, the periodic table, ionic bonding, covalent bonding, types of substances and calculations involving masses.

Calculations Involving Masses: Masses and Empirical Formulas, Conservation of mass, Moles

Groups in the periodic table, Rates of reaction, Heat Energy Changes in Chemical Reactions: Group 1, 7, 0, Rates of Reaction, Catalysts and Activation energy, Endothermic and Exothermic reactions, Energy changes in reactions

Fuels & Earth and Atmospheric Science: Hydrocarbons, fractional distillations, alkanes, completes and incomplete combustion, cracking, Early atmosphere, atmosphere today, climate change

Physics – Exam Paper 1

Topic Overview:

Forces and Motion: Vectors, Scalars, Distance/time graphs, acceleration, Velocity/time graphs, Resultant force, Newton's 3 laws, momentum, stop distances and crash hazards

Conservation of Energy: Energy stores and transfers, efficiency, conduction, convection and radiation, stored energies, renewable and non-renewable resources

Waves and the Electromagnetic Spectrum: Waves, Wave speed, Refraction, the electromagnetic spectrum, uses and dangers of the long and short wavelengths

Radioactivity: Atomic model, ionisation, Background radiation, types of radiation, radioactive decay, half-life, dangers of radioactivity

Subject Topic/Specification Summary

Subject: Computer Science

Exam – Hybrid Paper of Papers 1 and 2

- 1.1 Systems architecture
- 1.2 Memory and storage
- 1.3 Computer networks, connections and protocols
- 1.4 Network security
- 1.5 Systems software
- 1.6 Ethical, legal, cultural and environmental impacts of digital technology
- 2.1 Algorithms

Written paper – 90 mins 50% of total GCSE 80 marks

Non-calculator paper

All questions are mandatory

This paper consists of multiple-choice questions, short response questions and extended response questions.

Subject Topic/Specification Summary

Subject: Drama

Exam Paper – Full Paper

Topic Overview: Written Exam in two sections – One paper of 1 hour 45 mins.

Section A Bringing Texts to Life

The study of An Inspector Calls looking specifically at the staging of the play. You must know how to perform the piece using the correct terminology. There will also be focus on the staging of the play which includes set, costume, lighting and sound.

Section B; Live Theatre Evaluation. The evaluation of a live performance will be examined and will focus on the acting skills used and the Staging of the play.

Subject Topic/Specification Summary

Subject: Engineering – Full Paper

Topic Overview: **Engineering Materials and Properties**

Understand the properties and applications of metals (ferrous and non-ferrous), polymers, composites, and smart materials.

Key properties include strength, hardness, toughness, ductility, and thermal/electrical conductivity. Be prepared to justify material choices for specific products based on function, cost, and sustainability.

Topic Overview: **Manufacturing Processes**

Know key processes such as casting, forming, machining, and additive manufacturing (3D printing). Understand the advantages, disadvantages, and applications of each method.

Be able to evaluate process suitability for different materials and production scales (e.g., batch vs. mass production).

Topic Overview: **Engineering Drawings and CAD**

Interpret and create engineering drawings, including orthographic projections, sectional views, and dimensioning.

Understand the role of Computer-Aided Design (CAD) in product development, including simulation, prototyping, and manufacturing integration. Familiarity with industry standards (BS 8888) is useful.

Topic Overview: **Health and Safety in Engineering**

Understand workplace safety regulations, including risk assessments, PPE, and COSHH (Control of Substances Hazardous to Health).

Know the importance of maintaining a safe working environment, hazard identification, and compliance with Health and Safety Executive (HSE) guidelines.

Subject Topic/Specification Summary

Subject: English Literature

Exam - Hybrid Paper: A Christmas Carol & Power and Conflict Poetry

Topic Overview:

They will be provided with an extract and expected to analyse language from both this and the wider text.

Section A: A Christmas Carol

Exemplar Question: Starting with this extract, explore how Dickens has used the ghosts to influence Scrooge's journey of redemption.

Section B: Power and Conflict Poetry

Students have studied some of the 15 poems that are related through the themes of power and conflict. Students will be provided with one poem they have studied in lessons and asked to compare the analysis of this with one other poem from the power and conflict cluster.

Subject: English Language

Exam - Paper 2: Writer's Viewpoints and Perspectives

Topic Overview:

Section A: Analysis of two non-fiction extracts.

Q1 – Identify four true statements

Q2 – Summary (Comparative Inference)

Q3 – Language Analysis

Q4 – Comparative Analysis

Section B: Production of a piece of speech, letter or article (transactional writing) in response to a given stimulus by the exam board.

Subject Topic/Specification Summary

Subject: **Geography**

Exam – Hybrid Paper from Papers 1 and 2

Paper: 1

Topic Overview

Section 1A – The challenge of natural hazards – natural hazards, tectonic hazards.

Section 1B – The Living World – Ecosystems, tropical rainforests, hot deserts.

Section 1C – Physical landscapes in the UK – UK physical landscapes, Coastal landscapes in the UK.

Paper: 2

Topic Overview

Section 2A – Urban Issues and challenges – Urbanisation, case study of a major city in an LIC or NEE.

Section 2B – The changing economic world – The development gap, Case study of an LIC or NEE, UK economic futures.

Subject Topic/Specification Summary

Subject: **History**

Exam – Paper 1

Paper: 1 – America 1919 - 1973

Topic Overview:

American people and the 'Boom' – mass production hire purchase, Ford, Republicans, Stock Market, Jazz, women, prohibition, immigration, KKK, Red Scare, Sacco and Vanzetti.

American's experience of the Depression and New Deal – Unemployment, Farmers, Hoover, Roosevelt's election, New Deal successes and limitations, opposition to the New Deal, popular culture, impact of World War Two, Lend Lease, African Americans and Women.

Post – War America – American Dream, McCarthyism, popular culture, Rock n Roll, teenagers, Civil Rights campaign, Segregation, MLK, Malcolm X, Black Power, Acts of 1964 and 68, Great Society, Kennedy and Johnson, Feminist movement, Roe vs Wade and ERA.

Paper: 1 – Interwar 1919 - 39

Topic Overview:

Peacemaking – Armistice, Fourteen Points, aims of Wilson, Lloyd George and Clemenceau, terms of the Treaty of Versailles, Diktat, reactions of the allies, treaties with other countries.

The League of Nations – Formation and Covenant, powers, contribution to peace in 1920s, success and failures, treaties outside of the league, effects of the Depression, Manchuria, and Abyssinia

The origins and outbreak of World War Two – Hitler's aims, Stresa Front, remilitarisation of the Rhineland, reasons for and against appeasement, Nazi-Soviet Pact, invasion of Poland, responsibility for the war including Hitler, Stalin, and Chamberlain.

Subject Topic/Specification Summary

Subject: **Maths**

Exam – All three Full Papers

Paper: 1

Topic Overview:

Non – Calculator

All topics – Higher and Foundation – Please refer to Sparx.

Paper: 2

Topic Overview:

Calculator

All topics – Higher and Foundation – Please refer to Sparx.

Paper: 3

Topic Overview:

Calculator

All topics – Higher and Foundation – Please refer to Sparx.

Subject Topic/Specification Summary

Subject: **Sociology**

Exam – Paper 1

Paper 1: The sociology of families and education – The Sociological Approach

Topic Overview:

The Sociological approach (Research methods focus)

- Consensus vs conflict theories
- Sociological perspectives on social structures, processes and issues; feminism, functionalism, Marxism and interactionism
- Knowledge and understanding of sociological research methods including evaluation; questionnaires, interviews, observations, experiments, case studies
- Key sociological terms and concepts relating to social structures, processes and issues
- Key sociological terms and concepts explaining social phenomena including, society,

Paper 1: The sociology of families and education – Families and Households

Topic Overview:

Families

- Functions of families
- Family forms
- Conjugal role relationships
- Changing relationships within families
- Criticisms of families
- Divorce

Paper 1: The sociology of families and education - Education

Topic Overview:

Education

- Roles and functions of education
- The relationship between education and capitalism
- Educational achievement
- Processes within schools

Subject Topic/Specification Summary

Subject: Spanish

Exam – Full Papers

Thematic contexts studied in Year 10:

My personal world – self, family, friends, relationships, role models and equality

Lifestyle and wellbeing - sports, free time, food and drink, meals, healthy eating, healthy routines, ordering food and drink in a café/restaurant, typical Hispanic foods, mental wellbeing, illness, and injury

Media and technology – music, TV, film, social media, and gaming

Studying and my future – school subjects, teachers, facilities, primary school, uniform, school rules, advantages and disadvantages, ideal school, school trips, school day, future success

Listening

Listening and understanding in Spanish:

Section A: Listening comprehension – 11 questions

Section B: Dictation – Question 12 - listen to 6 short sentences. For sentences 1-3 you must write down the missing words in the gaps provided. For sentences 4-6 you must write down the whole sentence.

Covering all the GCSE themes including: My neighbourhood, Travel and tourism.

Reading

Reading and understanding in Spanish:

Section A: Reading comprehension – 9 questions

Section B: Question 10: Translation – 5 sentences from Spanish to English

Covering all the GCSE themes including: My neighbourhood, Travel and tourism.

Writing

Writing in Spanish

Question 1: write 4 short sentences to describe a photograph.

Question 2a or 2b: write 40 – 50 words covering 3 compulsory bullet points (opinion and future tense)

Questions 3a or 3b: write 80 – 90 words covering 4 compulsory bullet points (opinion, past and future tenses),

Question 4: Translate 5 sentences into Spanish.

Covering all the GCSE themes including: My neighbourhood, Travel and Tourism.

Subject Topic/Specification Summary

Subject: Triple Science

Biology – Exam Paper 1

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Key Concepts: Cells, Enzymes, Transporting substances.

Growth and Cellular Control: Mitosis, Animal and Plant growth, Stem cells, Nervous system, Brain and Spinal cord damage

Genetics: Meiosis, DNA, Alleles, Mutation, Variation, Mendel, Variants, Multiple and missing genes

Natural and Artificial Selection, Human evolution, natural selection, classification, selective breeding, Genetic engineering, Evidence for Darwin's theory, Tissue culture, fertiliser and biological control

Health and Disease: Non / Communicable diseases, Pathogens, Barriers, immune systems and antibiotics, Virus life cycles, plant defence and disease, monoclonal antibodies

Chemistry – Exam Paper 2

Topic Overview:

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Calculations Involving Masses: Masses and Empirical Formulas, Conservation of mass, Moles

Groups in the periodic table, Rates of reaction, Heat Energy Changes in Chemical Reactions: Group 1, 7, 0, Rates of Reaction, Catalysts and Activation energy, Endothermic and Exothermic reactions, Energy changes in reactions

Fuels & Earth and Atmospheric Science: Hydrocarbons, fractional distillations, alkanes, complete and incomplete combustion, cracking, Early atmosphere, atmosphere today, climate change

Hydrocarbons, Alcohols and Carboxylic Acids, Polymers: Alkanes and alkenes, ethanol production, alcohols, carboxylic acids, polymerisation

Qualitative Analysis: Flame tests, tests for positive and negative ions, choosing materials, composite materials, nanoparticles

Physics – Exam Paper 1

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Conservation of Energy: Energy stores and transfers, efficiency, conduction, convection and radiation, stored energies, renewable and non-renewable resources

Waves and the Electromagnetic Spectrum: Waves, Wave speed, Refraction, the electromagnetic spectrum, uses and dangers of the long and short wavelengths, The ear and hearing, ultrasound and infrasound, colour and lenses, radiation and temperature

Radioactivity: Atomic model, ionisation, Background radiation, types of radiation, radioactive decay, half-life, dangers of radioactivity, Uses of Radioactivity, Nuclear energy, fusion and fission

Astronomy: The Solar system, Gravity and orbits, Life cycles of stars, red shift, Origin of the universe