



HECKMONDWIKE
GRAMMAR SCHOOL

GCSE Revision Topics

Biology

Topic	Title	Further Details
1	Unit 1	Key concepts in Biology
2	Unit 2	Cells and control
3	Unit 3	Genetics
4	Unit 4	Natural selection and genetic modification

Business Studies

Topic	Title	Further Details
1	Theme 1: Investigating small business	Competition (1.2.4); Marketing mix (1.4.3); Business plans (1.4.4); Stakeholders (1.5.1); Economy & Business (1.5.4)
2	Theme 2: Building a business	Business growth (2.1.1), globalisation (2.1.3), Product (2.2.1), Price (2.2.2), Promotion (2.2.3); Production processes (2.3.1), Suppliers (2.3.2), Sales process (2.3.4); Business calculations (2.4.1); Organisational structures (2.5.1), recruitment (2.5.2), motivation (2.5.4)
3	9 markers	Marketing; technology
4	12 markers	Competition

The assessment is synoptic, with A, B, C sections as per existing exams.

Chemistry

Topic	Title	Further Details
1	Topic 2	Bonding, structure, and the properties of matter
2	Topic 3	Quantitative Chemistry
3	Topic 6	Rate and extent of chemical change
4	Topic 7	Organic Chemistry
5	Topic 8	Chemical Analysis

It is a synoptic paper and all questions in the paper may draw on the fundamental concepts and principles from sections 4.1 to 4.3 (i.e Atomic Structure and the periodic table, Bonding, structure and the properties of matter and the quantitative chemistry topic). Questions may be multiple choice, structured, closed short answer and open response.

Computer Science

Topic	Title	Further Details
1	Fundamentals of algorithms (approx 10%)	Understanding algorithms, efficiency of algorithms, searching and sorting algorithms
2	Programming (approx 25%)	Writing and tracing algorithms using pseudocode (including subroutines), data types and arrays
3	Fundamentals of data representation (approx 25%)	Number bases (base 10, base 2, base 16) and conversions between them, binary arithmetic, representing text, images and sound using binary, compression (RLE and Huffman coding)
4	Computer systems (approx 10%)	Hardware and software, Boolean logic (logic gates), software classification, system architecture
5	Fundamentals of computer networks (approx 10%)	Network types (PAN, LAN, WAN), wireless and wired networks, network topology (Star and Bus), protocols, 4 layer TCP/IP model
6	Fundamentals of cyber security (approx 15%)	Cyber security threats and methods to detect and prevent
7	Ethical, legal and environmental impacts of digital technology on wider society (approx 5%)	including issues of privacy

Drama

Topic	Title	Further Details
1	Section A: The Crucible	You need to: Re-read The Crucible, Revise Character Profiles, Use the Section A Booklet to recap writing structures for each question, Annotate extract to take into the assessment, Revise the Design Concepts
2	Section B: Live Theatre	You need to: Ensure your Live Theatre Notes are complete to use in the assessment, Rewatch AMC, Revise the writing structures for 9A and 9B

English Language

Topic	Title	Further Details
1	Paper 2 Language - Reading Section - 40 marks	You will be asked to read two non-fiction texts, one from the 19th century. There are four questions on the reading section of the exam: responding to true/false statements; summary of differences or similarities; language analysis and comparison.
2	Paper 2 Language - Writing Section - 40 marks	You will be asked to write an article, letter or speech in response to a statement. You will be rewarded for your content, organisation and spelling, punctuation and grammar.

English Literature

Topic	Title	Further Details
1	Macbeth - 30 marks	You can bring a copy of the play to use in the assessment. It must not contain any of your own annotations. You will be given an extract from the play and the question will ask you to respond to the extract and refer to other relevant parts of the play. You will have one hour to complete your essay.
2	Unseen Poetry - 24 marks	You will be given an unseen poem to read and respond to through writing an essay. You should focus on presenting your own interpretation of ideas within the poem and analysing the methods used to communicate this idea to the reader. You will have 45 minutes to complete this task.

French

Topic	Title	Further Details
1	Listening and reading	All vocabulary in your knowledge organiser, recognised from Spanish to English
2	Writing	All answers learnt for the speaking exam, verb tenses, complex constructions, grammar powerpoints on Teams. Learn higher tier vocabulary linked to topics you did not cover in your speaking exam.

Food

Topic	Title	Further Details
1	Core	p.85-90 Why food is cooked and how heat is transferred to food
2	Food Safety	p.192-199 The food safety principles when buying and storing food
3	Preparing, Cooking and Serving	p. 185-191 Preparing, cooking and serving food
4	Raising Agent	p.140-151 Raising Agents
5	Balanced Diet	p.38-45 and p.51 Making informed choices for a varied and balanced diet: young children and elderly
6	Marketing	p.231-234 Food marketing influences
7	Macronutrients	p. 2 - 7 Macronutrients: Protein
8	Carbohydrates	p.16 - 20 Carbohydrates
9	Food and the Environment	p.261-262 & p. 267 Food and the Environment
10	Sustainability	p.272 Sustainability of Food (Fairtrade)

Geography

Topic	Title	Further Details
1	Hazards	Tropical cyclones and Earthquakes
2	Living world	Ecosystems and Rainforests
3	UK Landscapes	Coasts and river flooding
4	Challenge of Urban environments	Urban regeneration
5	Economic Development	Closing the gap
6	Resources	Food and energy

Graphics

Topic	Title	Further Details (Knight, A., Crampton, K. and Walkley, C. (2018). OCR GCSE (9-1) design and technology. London: Hodder Education)
1	Design communication and drawing techniques	Chapter: 8 Pg 20-23 - Perspective Drawing/ Isometric Drawing/ Oblique Drawing/ Working Drawings (Third Angle Orthographic)/ Exploded Drawings
2	Exploring a context of a solution	Chapter 1. Pg 1- 4 - Design Influences/ Stakeholder Needs/ Primary User Needs/ Research (Primary & Secondary)/ Social Factors/ Cultural Factors/ Moral Factors
3	Usability	Chapter 2. Pg 5-7 - Inclusivity/ Ergonomics/ Anthropometrics/ Aesthetic Considerations/ Economic Factors
4	Categories of materials	Chapter 10. Pg 26-32 - Categories and Material Properties of; Papers and Boards / Timbers/ Metals/ Polymers (including TPE)
5	Properties of Materials	Chapter 11. Pg 34 - 37 - Density/ Strength/ Hardness/ Durability/ Strength-to-Weight Ratio/ Stiffness/ Elasticity/ Impact Resistance/ Plasticity/ Corrosive Resistance/ Flammability/ Absorbency/ Thermal Conductivity/ Electrical Conductivity/ Magnetic Properties
6	Controlled Movement	Chapter 12. pg 38-41; 144; 146-147 - Types of Motion/ Mechanisms/ Mechanical Advantage/ Levers/ Cams/ Gears/ Pulleys/ Levers and Linkages
7	Impact of New and Emerging Technologies	Chapter 14. Pg 48-49 - Economies of Scale/ Scale of Production/ Disruptive Technologies (Additive Manufacture i.e. 3D Printing/ Robotics/ Virtual Reality)/ CAD/ CAM - Impact on Traditional Manufacturing
8	In Depth - Paper and Boards	Chapter 15. Pg 50 - 63 - Paper/ Boards/ Laminated Layers/ Sources and Origins/ Ecological, Social and Ethical Issues/ Commonly Available Forms and Standard

		Units of Measurement/ Standard Components/ Structural Integrity/ Finishes and Surface Treatments/ Manipulating and Joining/ Digital Design Tools (CAD/CAM/ Vinyl Cutting/ Laser Cutting)/ Scales of Production/ Manufacturing Processes (Offset Lithographic/ Screen printing/ Digital Printing/ Die Cutting/ Flexographic Printing) / Cost and Availability
9	Additional Content (Not Covered in Book)	Self Assembly/ Printing Techniques/ Standard Components (Pg 56) / Jigs/ Formers/ Templates/ Cost and Sizes/ Maths (Calculating Angle, Calculating Quantities, Cost and Sizes)

History

Topic	Title	Further Details
1	Power and the people	<p>You will get a full paper (all four questions on Power and the People) This will include:</p> <ul style="list-style-type: none"> • A source Utility question (8 marks) • A significance question (8 marks) • A similarities question (8 marks) • An essay question (big picture from across the course) (16 marks + 4 SPaG) <p>The topics will cover:</p> <ul style="list-style-type: none"> • Magna Carta • Simon de Montfort and Origins of Parliament • Peasants revolt • Pilgrimage of Grace • Civil Wars • American Revolution
2	Conflict and Tension	<p>There will be two questions from this paper:</p> <ul style="list-style-type: none"> • A source 'inference question' – (4 marks) • A 'Write an account' question – (8 marks) <p>These will be from the following topics:</p> <ul style="list-style-type: none"> • Crises faced by the League of Nations in the 1930s • Appeasement and the events leading to World War Two
3	Germany	<p>There will be two questions from this paper:</p> <ul style="list-style-type: none"> • An interpretations question – this is a 3 part question – how the

		<p>interpretations differ (4 marks) , why they differ (4 marks) and which interpretation is more convincing (8 marks)</p> <ul style="list-style-type: none">• A bullet point question (12 marks) <p>They will be on the following topics:</p> <ul style="list-style-type: none">• The rise of the Nazi party in Germany up to 1933• The persecution of minorities in Nazi Germany 1933-1945
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Maths

Topic	Title	Further Details
1	Number (approx. 15%)	* Structure and Calculation * Fractions, decimals and Percentages * Measures and Accuracy * Real life maths problems
2	Algebra (approx. 30%)	* Notation, vocabulary and manipulation * Graphs * Solving equations and inequalities * Sequences
3	Ratio, Proportion and rates of change (approx. 20%)	* Compound measures * Scale factors and similarity * Ratio notation * Direct and Inverse Proportion * Growth and decay problems
4	Geometry and Measures (approx. 20%)	* Properties and Constructions * Mensuration and Calculation * Trigonometry * Transformations * Vectors
5	Probability & Statistics (approx. 15%)	* Representation of Probability including Venn and Tree Diagrams * Statistical Calculations and diagrams * Interpretations in context

Please note that the exam is synoptic, but some questions may include more than one topic. The test will consist of a mix of question styles, from short, single-mark questions to multi-step problems. More guidance can be found on this link: <https://corbettmaths.com/wp-content/uploads/2019/03/AQA-Higher-Checklist.pdf>

Music

Topic	Title	Further Details
1	Set Works - Deep Focus	Revise these 4 set works in detail in preparation for the extended writing question - Beethoven-Pathetique - Wicked-Defying Gravity - Queen-Killer Queen - J. Williams-Star Wars
2	Set Works - General listening	All 8 set works - Afro Celt Sound System-Release - JS Bach-Brandenburg - Beethoven-Pathetique - Wicked-Defying Gravity - Queen-Killer Queen - Purcell-Music for a While - Spalding-Samba em Preludio - J. Williams-Star Wars
3	Areas of Study	Revise the key features of the 4 areas of study in preparation for the unfamiliar question - Fusions, Instrumental Music, Vocal Music, Music for Stage & Screen
4	Dictation Practice	Practise your dictation skills in preparation for the dictation question. The dictation will be based on one of these 4 set works - Bach, Purcell, Star Wars, Samba em Preludio

PE

Topic	Title	Further Details
1	Physical factors affecting performance	Structure and function of skeletal system. Types of synovial joints. The structure and function of muscular system. Analysis of movement - Lever systems, planes and axes of rotation. Structure and function of cardiovascular and respiratory system. Effects of exercise on body systems. Components of fitness. Principles of training. Prevention of injury.
2	Socio cultural issues and sports psychology	Engagement patterns. Participation in PE and sport. Commercialisation of sport. Ethics in sport. Drugs in sport. Sports psychology - characteristics of skills. Goal setting. Mental preparation. Guidance. Feedback. Health, fitness and well being. Diet and nutrition.

Physics

Topic	Title	Further Details
1	4.1 Energy	4.1.1.1 Store and Systems, 4.1.1.2 Changes in energy, 4.1.1.4 Power, 4.1.2.1 Energy Transfers in a system, 4.1.3 National and global energy resources
2	4.2 Electricity	4.2.1.1 Standard circuit diagram symbols, 4.2.1.3 Current, resistance and p.d., 4.2.1.4 Resistors
3	4.4 Atomic Structure	4.4.2.3 Half-lives and random nature of decay, 4.4.3.1 Background Radiation, 4.4.3.2 Different half-lives of isotopes, 4.4.4.1 Nuclear Fission
4	4.5 Forces	4.5.1.2 Contact and Non-contact forces, 4.5.1.4 Resultant forces 4.5.6.1.5 Acceleration, 4.5.6.2.2 Newton's 2nd Law, 4.5.3 Forces and Elasticity 4.5.7.1 Momentum, 4.5.7.2 Conservation of Momentum, 4.5.7.3 Changes in Momentum
5	4.6 Waves	4.6.2.2 Properties of Em Waves 1, 4.6.2.5 Lenses, 4.6.2.6 Visible light
6	4.7 Magnets and Electromagnetism	4.7.2.1 Electromagnetism
Required Practical		
7	1. Specific Heat Capacity	A method of calculating the specific heat capacity of a material
8	6. Stretching a Spring	A method of measuring extension of a spring under tension to investigate Hooke's Law
9	7. Relationship between Force and Acceleration	A method of measuring acceleration when a force is applied to a system
10	9. Refraction and Reflection	A method for measuring angles of incidence, reflection and refraction

RE

Topic	Title	Further Details
1	Muslim Beliefs	You will need to revise all 8 subtopics
2	Crime and Punishment	You will need to revise subtopic 1 and 8
3	Living the Muslim Life	You will need to revise all 8 subtopics
4	Peace and Conflict	You will need to revise all 8 subtopics

Resistant Materials

Topic	Title	Further Details (Knight, A., Crampton, K. and Walkley, C. (2018). OCR GCSE (9-1) design and technology. London: Hodder Education)
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7	Impact of New and Emerging Technologies	Chapter 14. Pg 48-49 - Economies of Scale/ Scale of Production/ Disruptive Technologies (Additive Manufacture i.e. 3D Printing/ Robotics/ Virtual Reality)/ CAD/ CAM - Impact on Traditional Manufacturing

8	In Depth - Timbers	Chapter 16. Pg 64 - 85 - Physical Working Properties (Hardwoods/ Softwoods/ Manufactured Board)/ Sources and Origins/ Extraction and Conversion/ Commonly Available Stock Forms/ Standard Components/ Knock Down Fittings/ Finishes and Surface Treatments/ Manipulating and Joining/ Marking Out/ Manufacturing at Different Scales of Production
9	Additional Content (Not Covered in Book)	Self Assembly/ Printing Techniques/ Standard Components (Pg 56) / Jigs/ Formers/ Templates/ Cost and Sizes/ Maths (Calculating Angle, Calculating Quantities, Cost and Sizes)

Spanish

Topic	Title	Further Details
1	Listening and reading	All vocabulary in your knowledge organiser, recognised from Spanish to English
2	Writing	all answers learnt for the speaking exam, verb tenses, complex constructions, grammar powerpoints on Teams. Learn higher tier vocabulary linked to topics you did not cover in your speaking exam.