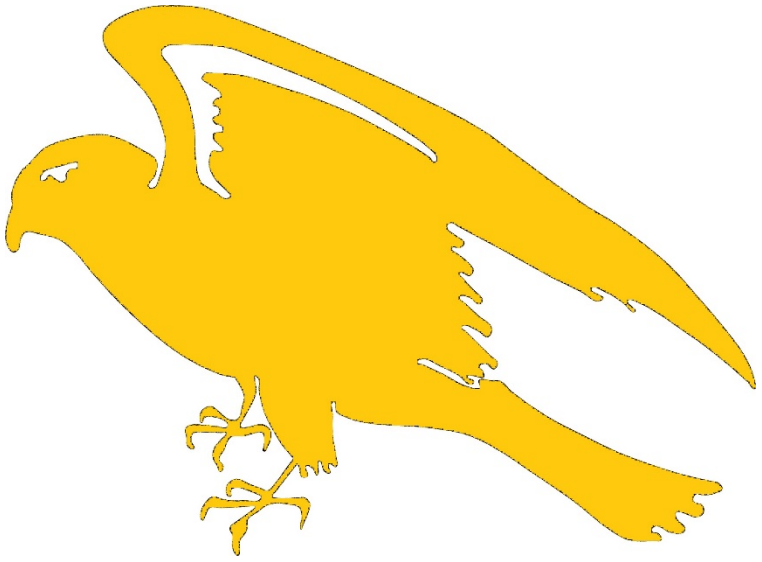

JOG School KS4 Advance Information Booklet

JOG School
KS4 Advance Information Booklet

Subject: Art

Exam board: Edexcel

Level of qualification: GCSE

Changes to coursework	Optional content
Students only complete one main portfolio. This includes a sketchbook of work and a final piece. The main theme for this project has been Fragments.	Students can also include the first course work project Fantastic and Strange from year 10 as extra work

Support materials

N/A but the timeline is:

- Friday 1st April – Sketchbook deadline – books handed in C1 by 2pm
- WB 4th April - students start final piece
- 9th April- 24th April Easter holiday
- WB 25th April students working on final piece
- Tuesday 3rd May - art/photo Exam (this is an inset day) students need to be in by 830am
- Friday 13th May - final piece deadline, hand in by 2pm
- Friday 27th May - Final hand in – end of course

Advance Information

N/A

Some further useful info

https://qualifications.pearson.com/en/qualifications/edexcel-gcses/art-and-design-2016/summer-2022-support.html

https://qualifications.pearson.com/content/dam/pdf/GCSE/Art%20and%20Design/2016/teaching-and-learning-materials/gcse-art-and-design-2022-faqs.pdf

Subject: Biology - Triple

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*N/A*

Support materials

All details on advanced information for GCSE Biology can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8461-AI-22.PDF

Advance Information

Paper one:

Spec points	H	F
4.1. CELL BIOLOGY		
4.1.1 CELL STRUCTURE		
4.1.1.1 Eukaryotes & Prokaryotes	G	G
4.1.1.2 Animal & Plant Cells	G	G
4.1.1.3 Cell Specialisation	G	G
4.1.1.4 Cell Differentiation	G	R
4.1.1.5 Microscopy	G	G
4.1.1.6 Culturing microorganisms	G	G
4.1.2 CELL DIVISION		
4.1.2.1 Chromosomes	A	A
4.1.2.2 Mitosis and the Cell Cycles	A	A
4.1.2.3 Stem Cells	A	A
4.1.3 TRANSPORT IN CELLS		
4.1.3.1 Diffusion	G	G
4.1.3.2 Osmosis	G	G
4.1.3.3 Active Transport	G	G
4.2 ORGANISATION		
4.2.1 PRINCIPLES OF ORGANISATION	A	R
4.2.2 ANIMAL TISSUES, ORGANS & ORGAN SYSTEMS		
4.2.2.1 The Human Digestive System	G	G
4.2.2.2 The Heart & Blood Vessels	G	G
4.2.2.3 Blood	R	R
4.2.2.4 Coronary heart Disease: a non-communicable disease	G	G
4.2.2.5 Health Issues	G	G
4.2.2.6 The effect of Lifestyle on some non communicable diseases	G	G
4.2.2.7 Cancer	R	R
4.2.3 PLANT TISSUES ORGANS & SYSTEMS		
4.2.3.1 Plant Tissues	G	A
4.2.3.2 Plant Organ Systems	G	A
4.3 INEFECTION & RESPONSE		
4.3.1 COMMUNICABLE DISEASES		
4.3.1.1 Communicable (infectious) Diseases	G	G
4.3.1.2 Viral Diseases	G	G
4.3.1.3 Bacterial Diseases	G	G

4.3.1.4 Fungal Diseases	G	G
4.3.1.5 Protist Diseases	G	R
4.3.1.6 Human Defence Systems	G	G
4.3.1.7 Vaccinations	G	G
4.3.1.8 Antibiotics & Painkillers	R	G
4.3.1.9 Discovery and development of drugs	R	G
4.3.2 Monoclonal antibodies	G	R
4.3.3 Plant disease	G	G
4.4 BIOENERGETICS		
4.4.1 PHOTOSYNTHESIS		
4.4.1.1. Photosynthetic Reaction	A	G
4.4.1.2 Rate of Photosynthesis	A	G
4.4.1.3 Uses of Glucose from Photosynthesis	A	R
4.4.2 RESPIRATION		
4.4.2.1 Aerobic & Anaerobic Respiration	A	R
4.4.2.2 Response to Exercise	R	R
4.4.2.3 Metabolism	A	R

Required practical's that will be assessed in F:
Required practical activity 1, 3, 4 & 6

Required practical's that will be assessed in H:
Required practical activity 1, 3 & 4

Paper two

Spec points	**H**	**F**
4.5 HOMEOSTATSIS & RESPONSE		
4.5.1 HOMEOSTASIS	A	G
4.5.2 THE HUMAN NERVOUS SYSTEM	G	G
4.5.2.1 Structure & function	R	G
4.5.2.2 The brain	R	R
4.5.2.3 The eye	R	R
4.5.2.4 Control of body temperature	G	G
4.5.3 HORMONAL COORDINATION IN HUMANS		
4.5.3.1 Human Endocrine System	G	G
4.5.3.2 Control of blood glucose concentration	G	G
4.5.3.3 Maintaining water and nitrogen	G	R
4.5.3.4 Hormones in human reproduction	R	G
4.5.3.5 Contraception	R	G
4.5.3.6 The use of Hormones to treat infertility (HT Only)	R	R
4.5.3.7 Feedback system (HT Only)	R	R
4.5.4 Plant hormones		
4.5.4.1 Control and coordination	G	G
4.5.4.2 Use of plant hormones (HT only)	R	R
4.6 INHERITANCE, VARIATION & EVOLUTION		
4.6.1 REPRODUCTION		
4.6.1.1 Sexual & Asexual reproduction	G	G
4.6.1.2 Meiosis	G	G
4.6.1.3 Advantages and disadvantages of sexual and asexual reproduction	R	R
4.6.1.4 DNA & Genome	G	G
4.6.1.5 DNA structure	G	G
4.6.1.6 Genetic Inheritance	G	G

4.6.1.7 Inherited Disorders	G	G
4.6.1.8 Sex Determination	R	R
4.6.2 VARIATION AND EVOLUTION		
4.6.2.1 Variation	R	R
4.6.2.2 Evolution	R	R
4.6.2.3 Selective Breeding	R	A
4.6.2.4 Genetic Engineering	R	A
4.6.2.5 Cloning	R	A
4.6.3 THE DEVELOPMENT OF GENETICE AND EVOLUTION		
4.6.3.1 Theory of evolution	R	R
4.6.3.2 Speciation	R	R
4.6.3.3 Understanding of genetics	R	R
4.6.3.4 Evidence for Evolution	R	G
4.6.3.5 Fossils	R	G
4.6.3.6 Extinction	R	G
4.6.3.7 Resistant Bacteria	R	R
4.6.4 CLASSIFICATION OF LIVING ORGANISMS	R	A
4.7 ECOLOGY		
4.7.1 ADAPTATION, INTERDEPENDENCE & COMPETITION		
4.7.1.1 Communities	A	A
4.7.1.2 Abiotic Factors	A	A
4.7.1.3 Biotic Factors	A	A
4.7.1.4 Adaptations	R	R
4.7.2 ORGANISATION OF AN ECOSYSTEM		
4.7.2.1 Levels of Organisation	G	
4.7.2.2 How materials are cycled	G	R
4.7.2.3 Decomposition	G	R
4.7.2.4 Impact of environmental change	R	
4.7.3 BIODIVERSITY & EFFECT OF HUMAN INTERACTION ON ECOSYSTEMS		
4.7.3.1 Biodiversity	R	R
4.7.3.2 Waste Management	A	
4.7.3.3 Land Use	A	R
4.7.3.4 Deforestation	R	R
4.7.3.5 Global warming	A	R
4.7.3.6 Maintaining Biodiversity	R	R
4.7.4 TROPHIC LEVELS IN AN ECOSYSTEM	A	R
4.7.4.1 Trophic levels	R	R
4.7.4.2 Pyramids of biomass	R	R
4.7.4.3 Transfer of biomass	A	R
4.7.5 FOOD PRODUCTION	A	R
4.7.5.1 Factors affecting food security	A	R
4.7.5.2 Farming techniques	A	R
4.7.5.3 Sustainable fisheries	R	R
4.7.5.4 Role of biotechnology	R	R

Required practical that will be assessed in F:
Required practical activity 7, 8 & 9

Required practical that will be assessed in H:
Required practical activity 8 & 9

Subject: Business Studies Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*N/A*

Support materials
N/A from exam board *Please see revision materials provided in class*

Advance Information

- This notice covers all examined components
- For each paper the list shows the major focus of the content of the exam.
- Students will be expected to apply their knowledge to unfamiliar contexts
- Students will be expected to draw on knowledge, skills and understanding from across the specification when responding to synoptic questions

3.1 Business in the real world

	Component 1	Component 2
3.1.1 The purpose and nature of businesses	• Purpose of business • Basic functions and types of business • Dynamic nature of business	
3.1.2 Business ownership	• Partnerships • Private limited companies (ltd)	• Public limited companies (plc)
3.1.3 Setting business aims and objectives	• What are business aims and objectives • Purpose of setting objectives	
3.1.6 Business planning	• Basic financial terms* • Basic financial calculations	• The purpose of business planning
3.1.7 Expanding a business	• Methods of expansion • Benefits and drawbacks of expansion • Diseconomies of scale	• Methods of expansion

3.2 Influences on business

	Component 1	Component 2

3.2.2 Ethical and environmental considerations		• Ethical considerations
		• Sustainability:
		  • global warming
		  • using scarce resources

3.2.3 The economic climate on businesses		• Interest rates:
		  • how fluctuating interest rates can affect businesses that rely on overdrafts and loans for finance
		  • how fluctuating interest rates can affect consumer and business spending
		• Consumer spending

3.2.5 Legislation	• Consumer law	

3.3 Business operations

	Component 1	Component 2
3.3.1 Production processes	Methods of production: • flow Efficiency in production: • lean production	
3.3.2 The role of procurement	Managing stock: • Just in time (JIT) • Just in case (JIC)	
3.3.3 The concept of quality	Methods of maintaining consistent quality: Total quality management (TQM)	
3.3.4 Good customer services	Benefits of good customer service, including: • increase in customer satisfaction • customer loyalty • increased spend • profitability	
	The ways in which advances in ICT have allowed customer services to develop: • websites • e-commerce	

3.4 Human Resources

	Component 1	Component 2
3.4.1 Organisational structures	• Organisational structures • Appropriateness of organisational structures	
3.4.2 Recruitment and selection of employees	• Methods of recruitment and selection of employees	
3.4.3 Motivating employees	• Importance of motivation in the workforce • Methods to motivate staff	
3.4.4 Training	• Importance of training the workforce • Types of training undertaken by businesses	

3.5 Marketing

	Component 1	Component 2
3.5.3 The purpose and methods of market research		Purpose of market research Methods of market research
3.5.4 The elements of the marketing mix: price, product, promotion and place (4Ps)		Pricing methods, including: • loss leader The factors that influence pricing decisions, including: • costs • nature of the market • degree of competition • product life cycle Product Product differentiation: • unique selling point (USP) • brand image The product life cycle: • research and development • introduction • growth • maturity • decline • extension strategies: • updating packaging
		• adding more or different features • changing target market • advertising • price reduction Product portfolio Promotional methods: • PR • sponsorship Reasons for promotion: • inform/remind customers about the product • create or increase sales • create or change the image of the product • persuade customers to buy the product Place (the different channels of distribution used by businesses): • telesales • Integrated nature of the marketing mix

3.6 Finance

3.6.1 Sources of finance		• Methods businesses use to raise finance • Appropriateness of sources of finance
3.6.2 Cash flow		• Interpreting cash flow forecasts
3.6.3 Financial terms and calculations		• Basic financial terms • Basic financial calculations* • Average rate of return • Break-even
3.6.4 Analysing the financial performance of a business		• Components of financial statements

6 Appendix: quantitative skills in business

6.1 Calculation	• averages • revenue, costs and profit	• gross profit margin and net profit margin ratios • average rate of return
		• cash flow forecasts, including total costs, total revenue and net cash flow
6.2 Interpretation	• information from graphs and charts	• information from graphs and charts

All details on advanced information for GCSE Business can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8132-AI-22.PDF

Subject: Chemistry - Triple Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
NA	*N/A*

Support materials

N/A in exams

All details on advanced information for GCSE Chemistry can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8462-AI-22.PDF

Advance Information

GCSE Triple Chemistry

Major focus	G
Could be in	A
Not assessed	R

Paper 1

Spec points	H	F
4.1 ATOMIC STRUCTURE & PERIODIC TABLE		
4.1.1 A SIMPLE MODEL OF ATOM, SYMBOLS & RELATIVE ATOMIC MASS		
4.1.1.1 Atoms, Elements and Compounds	A	G
4.1.1.2 Mixtures	A	G
4.1.1.3 The Development of the Model of the Atom	A	G
4.1.1.4 Relative electrical Charge of subatomic particles	A	G
4.1.1.5 Size & Mass of atoms	A	G
4.1.1.6 Relative Atomic Mass	A	G
4.1.1.7 Electronic Structure	A	G
4.1.2 THE PERIODIC TABLE		
4.1.2.1 The Periodic Table	G	G
4.1.2.2 Development of the Periodic Table	G	G
4.1.2.3 Metals & Non- Metals	G	G
4.1.2.4 Group 0	G	G
4.1.2.5 Group 1	G	G
4.1.2.6 Group 7	G	G
4.2 BONDING, STRUCTURE & THE PROPERTIES OF MATTER		
4.2.1 CHEMICAL BONDS, IONIC, COVALENT & METALLIC		
4.2.1.1 Chemical Bonds	G	G
4.2.1.2 Ionic Bonds	G	G
4.2.1.3 Ionic Compounds	G	G
4.2.1.4 Covalent Bonding	G	G
4.2.1.5 Metallic Bonding	G	G
4.2.2 HOW BONDING % STRCUTURE ARE RELATED TO PROPERTIES OF SUBSTANCES		
4.2.2.1 The three states of Matter	G	G
4.2.2.2 State Symbols	G	G
4.2.2.3 Properties of Ionic Compounds	G	G
4.2.2.4 Properties of small Molecules	G	G
4.2.2.5 Polymers	G	G
4.2.2.6 Giant Covalent Structures	G	G
4.2.2.7 Properties of metals & Alloys	G	G
4.2.2.8 Metals as conductors	G	G
4.2.3 STRUCTURE & BONDING OF CARBON		
4.2.3.1 Diamond	G	A
4.2.3.2. Graphite	G	A
4.2.3.3 Graphene & Fullerenes	G	A
4.2.4 BULK AND SURFACE PROPERTIES OF MATTER INCLUDING NANOPARTICLES		
4.2.4.1 Bulk Properties of Nanoparticles	R	G
4.2.4.2 Uses of nanoparticles	R	G

4.3 QUANTITATIVE CHEMISTRY		
4.3.1 CHEMICAL MEASUREMENTS, CONSERVATION OF MASS & THE QUANTITATIVE INTERPRETATION		
4.3.1.1 Conservation of mass & Balanced chemical equations	A	A
4.3.2.2 Relative Formula Mass	A	A
4.3.1.3 Mass Changes when a reactant or product is a gas	A	A
4.3.1.4 Chemical Measurements	A	A
4.3.2 USE OF AMOUNT OF SUBSTANCE IN RELATION TO MASS OF PURE SUBSTANCES		
4.3.2.1 Moles (HT Only)	G	A
4.3.2.2 Amount of substance equations (HT Only)	G	A
4.3.2.3 Using Moles to balance equations (HT Only)	G	A
4.3.2.4 Limiting reactants (HT Only)	G	A
4.3.2.5 Concentrations of Solutions	G	A
4.4 CHEMICAL CHANGES		
4.4.1 REACTIVITY OF METALS		
4.4.1.1 Metal Oxides	G	A
4.4.1.2 The Reactivity series	G	A
4.4.1.3 Extraction of metals & reduction	G	A
4.4.1.4 Oxidation & Reduction in terms of electrons (HT Only)	G	A
4.4.2 REACTIONS OF ACIDS		
4.4.2.1 Reactions of Acids with Metals	G	G
4.4.2.2 Neutralisation of acids and Salt Production	G	G
4.4.2.3 Soluble Salts	G	G
4.4.2.4 The pH Scale & Neutralisation	G	G
4.4.2.5 Strong & Weak acids (HT Only)	G	G
4.4.3 ELECTROLYSIS		
4.4.3.1 The process of Electrolysis	G	A
4.4.3.2 Electrolysis or Molten Ionic Compounds	G	A
4.4.3.3 Using Electrolysis to extract Metals	G	A
4.4.3.4 Electrolysis of Aqueous Solutions	G	A
4.5 ENERGY CHANGES		
4.5.1 EXOTHERMIC & ENDOTHERMIC REACTIONS		
4.5.1.1 Energy Transfer during Exo & Endothermic Reactions	G	G
4.5.1.2 Reaction Profiles	G	G
4.5.1.3 The energy change of reactions (HT Only)	G	G
4.5.2 CHEMICAL CELLS AND FUEL CELLS		
4.5.2.1 Cells and batteries	A	R
4.5.2.2 Fuel Cells	A	R

Required practical's that will be assessed in F & H:

Required practical activity 1: preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution.

• *Required practical activity 2*: determination of the reacting volumes of solutions of a strong acid and a strong alkali by titration.

• *Required practical activity 4*: investigate the variables that affect temperature changes in reacting solutions such as, eg, acid plus metals, acid plus carbonates, neutralisations, displacement of metals.

Chemistry paper 2

Spec points	H	F
4.6 THE RATE & EXTENT OF CHEMICAL CHANGE		
4.6.1 RATE OF REACTION		
4.6.1.1 Calculation rates of Reactions	G	G
4.6.1.2 Factors which affect the rates of chemical reactions	G	G
4.6.1.3 Collision Theory & Activation Energy	G	G
4.6.1.4 Catalysts	G	G
4.6.2 REVERSIBLE REACTIONS & DYNAMIC EQUILIBRIUM		
4.6.2.1 Reversible Reactions	G	G
4.6.2.2 Energy changes & Reversible reactions	G	G
4.6.2.3 Equilibrium	G	G
4.6.2.4 The effect of changing condition on equilibrium (HT only)	G	G
4.6.2.5 The effect of changing concentrations (HT Only)	G	G
4.6.2.6 The effect of Temperature changes on Equilibrium (HT Only)	G	G
4.6.2.7 The effect of pressure changes on equilibrium (HT Only)	G	G
4.7 ORGANIC CHEMISTRY		
4.7.1 CARBON COMPOUNDS AS FUELS & FEEDSTOCK		
4.7.1.1 Crude oil, Hydrocarbons and alkanes	G	G
4.7.1.2 Fractional Distillation and Petrochemicals	G	G
4.7.1.3 Properties of hydrocarbons	G	G
4.7.1.4 Cracking & Akenes	G	G
4.7.2 The REACTIONS OF ALKENES AND ALCOHOLS		
4.7.2.1 Structure and formulae of alkenes	A	A
4.7.2.2 Reactions of alkenes	A	A
4.7.2.3 Alcohols	A	A
4.7.2.4 Carboxylic acids	A	A
4.7.3 SYNTHETIC AND NATURAL OCCURRING POLYMERS		
4.7.3.1 Addition polymerisation	A	A
4.7.3.2 Condensation polymerisation	A	A
4.7.3.3 Amino acids	A	A
4.7.3.4 DNA	A	A
4.8 CHEMICAL ANALYSIS		
4.8.1 PURITY, FORMULATION & CHROMATOGRAPHY		
4.8.1.1 Pure substances	A	A
4.8.1.2 Formulations	A	A
4.8.8.1.3 Chromatography	A	A
4.8.2 IDENTIFATION OF COMMON GASES		
4.8.2.1 Test for Hydrogen	A	R
4.8.2.2 Test for Oxygen	A	R
4.8.2.3 Test for Carbon Dioxide	A	R
4.8.2.4 Test for Chlorine	A	R
4.8.3 IDENTIFICATION OF IONS BY CHEMICAL SPECTROSCOPIC MEANS		
4.8.3.1 Flame tests	A	G
4.8.3.2 Metal Hydroxides	A	G
4.8.3.3 Carbonates	A	G

4.8.3.4 Halides	A	G
4.8.3.5 Sulfates	A	G
4.8.3.6 Instrumental methods	A	G
4.8.3.7 Flame emission spectroscopy	A	G
4.9 CHMISTRY OF THE ATMOSPHERE		
4.9.1 THE COMPOSITION & EVOLUTION OF THE EARTH'S ATMOSPHERE		
4.9.1.1 The Proportions of different gases in the atmosphere	G	G
4.9.1.2 The Earths Early Atmosphere	G	G
4.9.1.3 How Oxygen increased	G	G
4.9.1.4 How Carbon Dioxide Decreased	G	G
4.9.2 CARBON DIOXIDE & METHANE AS GREENHOUSE GASES		
4.9.2.1 Greenhouse Gases	R	A
4.9.2.2 Human Activities which contribute to greenhouse gases in atmosphere	R	A
4.9.2.3 Global Climate Change	R	A
4.9.2.4 The carbon footprint and its reduction	R	A
4.9.3 COMMON ATMOSPHERIC POLLUTANTS& THEIR SOURCES		
4.9.3.1 Atmospheric pollutants from fuels	A	A
4.9.3.2 Properties & Effects of atmospheric pollutants	A	A
4.10 USING RESOURCES		
4.10.1 USING THE EARTH'S RESOURCES & OBTAINING POTABLE WATER		
4.10.1.1 Using the Earths resources & sustainable development	G	G
4.10.1.2 Potable water	G	G
4.10.1.3 Waste Water treatment	G	G
4.10.1.4 Alternative methods of extracting metals (HT Only)	G	G
4.10.2 LIFE CYCLE ASSESSMENT & RECYCLING		
4.10.2.1 Life cycle assessment	A	G
4.10.2.2 Ways of reducing the use of resources	A	G
4.10.3 USING MATERIALS		
4.10.3.1 Corrosion and its prevention	A	A
4.10.3.2 Alloys as useful materials	A	A
4.10.3.3 Ceramics, polymers and composites	A	A
4.10.4 THE HABER PROCESS AND THE USE OF NPK FERTILISERS		
4.10.4.1 The Haber Process	G	G
4.10.4.2 The production and uses of NPK fertilisers	G	G

Required practical that will be assessed in H:

Required practical activity 5: investigate how changes in concentration affect the rates of reactions by a method involving measuring the volume of a gas produced and a method involving a change in colour or turbidity. This should be an investigation developing a hypothesis.

• Required practical activity 7: use of chemical tests to identify the ions in unknown single ionic compounds covering the ions from sections Flame tests through to Sulfates.

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Subject: Child Development Exam board: OCR

Level of qualification: Level 1/2

Changes to coursework	Optional content
R019 Learning Aim 1 and 2 Candidates can complete this element by reducing the number of types of equipment for candidates to investigate in Task 1 in the set assignment. R020 Learning Aim 3 For the initial visit candidates can use video recordings of a child at play. Reduction of planning and carrying out **one** activity than two. Learning Aim 4 Candidates do not have to use the same child for the initial visit and carrying out the planned activity. The play activity can be carried out without the candidate present. Video recording or simulated role play can be used. The evaluation will be based on feedback from the video recording, simulated role play or question and answer session.	*N/A*
Support materials	
N/A	
Advance Information	
N/A	

Subject: Citizenship

Exam board: OCR

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*N/A*

Support materials
N/A in exams *Year 11 have been emailed the revision guide and a vast variety of resources to help them with their revision. They should contact Mrs Scott if they need these support materials again.*

Advance Information
Very little has been taken out of the GCSE citizenship course from the three exam papers. However, OCR have decided not to include the active campaign that year eleven worked on last year. However, year eleven should still be mindful that they could refer to the campaign in an exam question if they feel it is relevant (e.g. they could be asked what might make a successful campaign in an exam question in paper three, so could refer to their own campaign here and highlight the successes and areas for development). All details on advanced information for citizenship can be found here: https://www.ocr.org.uk/qualifications/2022-advance-information/

Subject: Computer Science

Exam board: OCR

Level of qualification: GCSE

Changes to coursework	Optional content
N/A (No NEA)	*N/A*

Support materials

N/A in exams
Please see revision links on Class charts for the group.

Advance Information

- This notice covers component J277/01 Computer Systems.
- There is no advance information for J277/02 Computational Thinking and Algorithms.
- The topics identified in the Advanced information below will be in the exam paper.
- Any topic not identified that can be linked to those topics may be in the exam

Specification Reference	**Name of topic**	**Sub part of topic directly assessed**
1.1 Systems architecture	1.1.1 Architecture of the CPU	The purpose of the CPU Common CPU components and their features. Von Neumann architecture
1.2 Memory and storage	1.2.1 Primary storage (Memory)	*All subtopics to be covered*
	1.2.2 Secondary storage	*All subtopics to be covered*
	1.2.3 Units	The units of data storage
	1.2.4 Data Storage	Numbers. Characters. Images. Sound.
	1.2.5 Compression	*All subtopics to be covered*
1.3 Computer networks, connections and protocols	1.3.1 Networks and topologies	Factors that affect the performance of networks. The hardware needed to connect stand-alone computers into a Local Area Network. The Internet as a worldwide collection of computer networks.
	1.3.2 Wired and wireless networks, protocols and layers	Modes of connection. Encryption. IP addressing and MAC addressing. Standards. Common protocols.
1.4 Network security	1.4.2 Identifying and preventing vulnerabilities	Common prevention methods.
1.6 Ethical, legal, cultural and environmental impacts of digital technology	1.6.1 Ethical, legal, cultural and environmental impact	Impacts of digital technology on wider society. Legislation relevant to Computer Science.

All details on advanced information for GCSE Computer Science can be found here:
https://www.ocr.org.uk/qualifications/2022-advance-information/

Subject: Drama Exam board: AQA

Level of qualification: GCSE

Advance Information
The drama course is split into three components. Component 1: Written exam Exam to be taken in the summer, split into the following sections • Section A: General Knowledge of theatre • Section B: 'Blood Brothers' • Section C: Live Theatre Review
Component 2: Devising Practical performance exam previously taken in November Three pieces of coursework, outlined as follows • Section 1: Initial response to stimulus • Section 2: Development and collaboration • Section 3: Analysis and evaluation Final Deadline for completed coursework will be 1st of April
Component 3: Text in Practice Practical performance exam to be taken 11th March
Changes to course
Component 3: *Initially Text in Practice required two extracts from a published play to be learnt and performed. This has been adapted to be a singular extract, the score of which will be doubled.* All other aspects of the course will remain the same.
Support materials
N/A in exams Materials for revision for the upcoming exam and for coursework completion can be found in the student share: faculty, expressive arts, drama. Following links will also offer support. https://www.bbc.co.uk/bitesize/examspecs/zrnjwty https://www.aqa.org.uk/subjects/drama/gcse/drama-8261 https://www.illuminatepublishing.com/wp-content/uploads/samples/Blood_Brothers_Play_Guide_for_AQA_GCSE_Drama/22/ https://revisionworld.com/a2-level-level-revision/drama-gcse-level/studying-drama/drama-gcse-past-papers/aqa-gcse-drama-past-papers

Subject: English Language

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
Spoken Language presentations are not required to be recorded. The audience for the presentations can comprise of one person (the marker).	*N/A*

Support materials

N/A in exams

2022 Revision Calendar
https://www.johnofgauntschool.org/attachments/download.asp?file=848&type=pdf
Paper 1 Revision Guide
https://www.johnofgauntschool.org/attachments/download.asp?file=465&type=pdf
Paper 2 Revision Youtube Channel
www.youtube.com/playlist?list=PLgGFsWf-P-cB-GSeqYup7PXId4pbldQVq

Advance Information

There is no advance information for Paper 1.

Paper 2:

The two sources that will appear on the paper will be:
Source A: 21st century autobiographical writing
Source B: 19th century essay

For section B (the writing section), students will be required to write an **article**.

The advanced information for English Language can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8700-AI-22.PDF

Subject: English Literature

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*One unit of the course can be dropped. We have selected to drop the unit which we haven't taught to students (the modern play – An Inspector Calls).*

Support materials
N/A in exams ***2022 Revision Calendar*** *https://www.johnofgauntschool.org/attachments/download.asp?file=848&type=pdf* ***Romeo and Juliet Revision Guide*** *https://www.johnofgauntschool.org/attachments/download.asp?file=648&type=pdf* ***Unseen Poetry Revision Guide*** *https://www.johnofgauntschool.org/attachments/download.asp?file=464&type=pdf* ***Jekyll and Hyde Revision Guide (not applicable for Ms Marshall's class)*** *https://www.johnofgauntschool.org/attachments/download.asp?file=466&type=pdf* ***Ms Marshall's Revision Website*** https://vmagcseenglish.wordpress.com/

Advance Information
No advance information for English Literature All details for GCSE English Literature can be found here: https://www.aqa.org.uk/subjects/english/gcse/english-literature-8702/changes-for-2022

Subject: Food Preparation

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
NEA1- not to be completed this year *NEA2 – from 4 to 3 trials, for the practical exam – from 3 complex dishes to 2 complex dishes and side dishes.*	*The information below is for section 2 – long answer questions. Any topic from the entire specification can be asked for section 1.*

Support materials

N/A in exams
https://www.foodafactoflife.org.uk/
https://www.bbc.co.uk/bitesize/subjects/zdn9jhv
https://senecalearning.com/en-GB/

Advance Information

3.2.3.1 Making informed choices • the current guidelines for a healthy diet • portion size and costing when meal planning • how people's nutritional needs change and how to plan a balanced diet for different life stages • how to plan a balanced meal for specific dietary groups • how to maintain a healthy body weight throughout life	*G*
3.2.3.4 Diet, nutrition and health • the relationship between diet, nutrition and health • major diet related health risks	*G*
3.3.2.2 Carbohydrates • Gelatinisation • Dextrinisation • Caramelisation	*G*
3.4.2.1 Buying and storing food • the food safety principles when buying and storing food	*G*
3.4.2.2 Preparing, cooking and serving • the food safety principles when preparing, cooking and serving food	*G*
3.5.1.1 Factors affecting food choice • To know and understand factors which may influence food choice.	*G*
3.6.1.2 Food and the environment • environmental issues associated with food	*G*
3.6.2.1 Food production • Primary and Secondary stages of processing and production • how processing affects the sensory and nutritional properties of ingredients	*G*
NEA1	*R*
NEA2 – Cardiovascular Health Problems – 50% total GCSE	*G*

All details on advanced information for GCSE Food Preparation can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8585-AI-22.PDF

AQA Food Preparation and Nutrition - Quizlet links

Download the 'Quizlet' app

These links have a number of different revision activities which you can use including flashcards, test, match, learn.

GCSE AQA Food Preparation and Nutrition - https://quizlet.com/gb/547685841/gcse-aqa-food-nutrition-flash-cards/

Key terms - https://quizlet.com/gb/186912837/aqa-food-preparation-and-nutrition-key-terms-flash-cards/

Vocabulary - https://quizlet.com/gb/247933076/aqa-food-preparation-and-nutrition-vocabulary-flash-cards/

Diet, nutrition and health

- Macronutrients - https://quizlet.com/gb/249073463/macronutrients-flash-cards/
    - Carbohydrates - https://quizlet.com/gb/555791548/nutrients-macronutrients-carbohydrates-flash-cards/
    - Protein - https://quizlet.com/gb/555778183/nutrients-macronutrients-protein-flash-cards/
    - Fat - https://quizlet.com/gb/247932291/aqa-food-preparation-and-nutrition-fat-flash-cards/
- Micronutrients –
    - Vitamins - https://quizlet.com/gb/249181011/vitamins-flash-cards/
    - Minerals - https://quizlet.com/gb/249224004/minerals-flash-cards/
    - Water - https://quizlet.com/gb/640087060/nutrients-micronutrients-water-flash-cards/
    - Minerals - https://quizlet.com/gb/640060751/nutrients-micronutrients-minerals-flash-cards/
    - Retaining vitamins and antioxidants - https://quizlet.com/gb/640055970/nutrients-micronutrients-retaining-vitamins-and-antioxidants-flash-cards/
    - Water soluble vitamins - https://quizlet.com/gb/640025365/nutrients-micronutrients-water-soluble-vitamins-flash-cards/
    - Fat soluble vitamins - https://quizlet.com/gb/640022717/nutrients-micronutrients-fat-soluble-vitamins-flash-cards/
- DRV - https://quizlet.com/gb/249178239/dietary-reference-values-flash-cards/
- Nutritional requirements through life - https://quizlet.com/gb/268282787/nutritional-requirements-through-life-flash-cards/
- Energy needs - https://quizlet.com/gb/268541415/energy-needs-flash-cards/
- Energy needs - https://quizlet.com/gb/556166781/nutritional-needs-and-health-energy-needs-flash-cards/
- Diet nutrition and health - https://quizlet.com/gb/279738525/diet-nutrition-and-health-flash-cards/
- Eatwell Guide - https://quizlet.com/gb/619994457/eatwell-guide-flash-cards/

Food science

- Cooking of food and heat transfer - https://quizlet.com/gb/280073029/cooking-of-food-and-heat-transfer-flash-cards/
- Functional and chemical properties of food - https://quizlet.com/gb/280102839/functional-and-chemical-properties-of-food-flash-cards/
- Functional and chemical properties of food: Carbohydrates https://quizlet.com/gb/556510731/functional-and-chemical-properties-of-food-carbohydrates-flash-cards/
- Functional and chemical properties of food: Protein https://quizlet.com/gb/556505093/functional-and-chemical-properties-of-food-proteins-flash-cards/
- Cooking of food and heat transfer: selecting appropriate cooking methods https://quizlet.com/gb/556207628/cooking-of-food-and-heat-transfer-selecting-appropriate-cooking-methods-flash-cards/
- Cooking of food and heat transfer: Why food is cooked and how heat is transferred to food https://quizlet.com/gb/556199475/cooking-of-food-and-heat-transfer-why-food-is-cooked-and-how-heat-is-transferred-to-food-flash-cards/

Food safety

- Food safety - https://quizlet.com/gb/247931692/aqa-food-preparation-and-nutrition-food-safety-flash-cards/
- https://quizlet.com/558928533/aqa-gcse-food-preparation-and-nutrition-food-safety-diagram/#
- Food spoilage and contamination - https://quizlet.com/gb/280460076/food-spoilage-and-contamination-flash-cards/
- Buying and storing food - https://quizlet.com/gb/631231255/food-preparation-and-nutrition-term-1-food-safety-buying-and-storing-food-flash-cards/
- Preparing cooking and serving food - https://quizlet.com/hk/618345330/preparing-cooking-and-serving-food-flash-cards/

Food choice

- Food choice- https://quizlet.com/gb/280715595/food-choice-flash-cards/
- British and international cuisine - https://quizlet.com/gb/280871365/british-and-international-cuisines-flash-cards/
- Factors affecting food choice: Food choices
- https://quizlet.com/gb/598335978/factors-affecting-food-choice-food-choices-flash-cards/

Food provenance

- Environmental impact and sustainability: food sources
- https://quizlet.com/gb/604542973/environmental-impact-and-sustainability-food-sources-flash-cards/
- Food provenance - https://quizlet.com/gb/280875911/food-provenance-flash-cards/

- Food processing and production - https://quizlet.com/gb/280879084/food-processing-and-production-flash-cards/
- Examples of seasonal foods - https://quizlet.com/gb/494229055/seasonal-food-flash-cards/
- Carbon footprint - https://quizlet.com/645874861/carbon-footprint-flash-cards/

Subject: French

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	Writing papers will include an additional optional question for the overlap question at both tiers (Question 4/Question 1) and for Higher tier Question 2. This means there will be 3 90-word questions and 3 150-word questions to choose from, rather than 2. This is so students can answer on their preferred theme. For each optional question, the theme will be given in the introduction to the question in the question paper.

Support materials
N/A

Advance Information
There is no Advance Information for Paper 1 (Listening), Paper 2 (Speaking) or Paper 3 (Reading). Therefore all parts of the specification will need to be revised for these papers, as well as for the Paper 4 Writing Translation. On Paper 4 – Writing, at Foundation Tier, on the Theme 1 90-word question there will be no bullet point on Customs and Festivals. On the Theme 2 90-word question there will be no bullet point on Global Issues (environment and poverty/homelessness), or on Travel and tourism. On the Theme 3 90-word question there will be no bullet point on Education Post-16. On Paper 4 – Writing, at Higher Tier, on the Theme 1 150-word question there will be no bullet point on Free Time Activities. On the Theme 2 150-word question there will be no bullet point on Travel and Tourism. The full Advance Information document for AQA French GCSE can be found here: https://filestore.aqa.org.uk/content/summer-2022/AQA-8658-AI-22.PDF

Subject: Further Maths Exam board: EDEXCEL

Level of qualification: AQA Level 2 Certificate (FOR SOME STUDENTS IN 11L/MA1)

Changes to coursework	Optional content
N/A	N/A

Support materials

N/A in exams

The Further Maths Qualification specification, along with sample papers and the formulae sheet, can be found at:

https://www.aqa.org.uk/subjects/mathematics/aqa-certificate/further-mathematics-8365

Topics covered can all be found on the Hegarty Maths website, to which all students have access.

Advance Information

The AQA advanced information suggests that the key areas of focus for students' preparation should start with the topics listed below. They do, however, clarify that any of the topics on the syllabus could be examined. Students will be credited with using any relevant knowledge from the syllabus when solving a question.

Paper 1 8365/1 June 2022

Topic	Detail
Number	Percentage increase
	Ratio
	Rationalisation of surd
Algebra	Inverse function
	Identity
	Expanding brackets
	Binomial expansion
	Changing subject of formula
	Completing the square
	Quadratic inequality
	Draw graph of function
	Simultaneous equations, one linear and one second order
	Index laws
	nth term of sequence
	Limiting value of sequence
	Quadratic sequence
Coordinate Geometry	Equation of line
	Length of a line
	Intercept of a line
	Point on circle
	Equation of tangent to a circle
Calculus	Differentiation
	Stationary points
Matrix Transformations	Matrix multiplication
	Matrix transformations
Geometry	Circle theorems
	Geometric proof
	Sine rule
	Pythagoras' Theorem
	Trigonometrical graph
	Trigonometrical value
	Trigonometrical identity

Paper 2 8365/2 June 2022

Topic	Detail
Number	Ratio
	Product rule
Algebra	Inequality
	Expanding three brackets
	Factorisation
	Rational expression simplification
	Factor theorem
	Exponential graph recognition
	Solving equations
	Quadratic equation
	Three simultaneous equations
	Quadratic inequality
	Index laws
	Algebraic proof
	Linear sequence
Coordinate Geometry	Equation of line
	Midpoint of line
	Parallel line
	Equation of circle
Calculus	Rate of change
	Differentiation
	Gradient of curve
Matrix Transformations	Matrix multiplication
Geometry	Cyclic quadrilateral
	Area of a triangle
	Pythagoras' Theorem in 3D
	Trigonometry
	Trigonometry in 3D
	Trigonometric equation

Subject: Geography Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
There is no coursework attached to this course	Please see detail below

Support materials

The full AQA guidance can be accessed from the link below:
https://www.aqa.org.uk/subjects/geography/gcse/geography-8035/changes-for-2022

Paper 3 pre-release materials will be available from 22 March 2022. We will familiarise students with these resources in class, however students should spend time at home ensuring they are confident with this resource.

Advance Information:

Paper 1: Living with the physical environment

No changes have been made to Paper 1: Living with the physical environment.

Paper 2: Challenges in the human environment

Optionality will be introduced into 8035/2 Paper 2: Challenges in the human environment.

- Students must answer all questions in Section A: Urban issues.
- They will then choose to answer **either** Section B: The changing economic world **or** Section C: The challenge of resource management.

The total time allocation for Paper 2 will be reduced from 1 hour 30 minutes to 1 hour 15 minutes.

The total marks for Paper 2 will be reduced from 88 marks to 63 marks (a removal of 25 marks).
Sections B and C will now have equal weighting worth 30 marks each.
The highest tariff question in both Section B and C will be 6 marks.
There are 3 spelling, punctuation and grammar (SPaG) marks that will appear in the 9-mark question at the end of Section A.
If students choose to answer Section C the normal rubric will apply, where students must answer question 3 and question 5 water.

Paper 3: Geographical applications.

Because fieldwork is not required, the exam board has removed questions about students' own fieldwork experience (known as 'familiar fieldwork') from the exam.

Question 5, Section B (on familiar fieldwork) will be removed.
There are 3 SPaG marks in question 5 which will be moved to one of the 6-mark questions within Section A (issue evaluation) so that students can still access these marks
The total number of marks available for the 8035/3 paper will reduce from 76 to 56 marks (a removal of 20 marks).

The total time allocation for the 8035/3 paper will reduce from 1 hour 15 minutes to 1 hour.
Questions on 'unfamiliar fieldwork' (theoretical understanding of the fieldwork enquiry process) will remain.

8035/3/PM pre-release materials will be available from 22 March 2022.

Subject: History

Exam board: Edexcel

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*You will sit 3 papers only- all topic areas for these 3 modules are compulsory* *You will NOT be examined on International Relations*

Support materials

N/A in exams

https://qualifications.pearson.com/content/dam/pdf/GCSE/History/2016/specification-and-sample-assessments/gcse-9-1-history-specification.pdf

History specification- you can remind yourself of what is on the syllabus using the specification – remember to only look at the 3 options that you will be examined on!

Advance Information

Paper 1

Option 10: Crime and punishment in Britain, c1000–present and
Whitechapel, c1870-c1900: crime, policing and the inner city

Paper 2

Option B3: Henry VIII and his ministers, 1509–40

Paper 3

Option 33: The USA, 1954–75: conflict at home and abroad

All details on advanced information for GCSE History can be found here:

https://www.gov.uk/government/consultations/proposed-changes-to-the-assessment-of-gcses-as-and-a-levels-in-2022

https://qualifications.pearson.com/en/qualifications/edexcel-gcses/history-2016/summer-2022-support.html

https://qualifications.pearson.com/content/dam/pdf/GCSE/History/2016/Teaching-and-learning-materials/gcse-history-summer-2022-assessment-arrangements.pdf

Subject: Health and Social Care Exam Board: OCR

Level of qualification: Level 1/2

Changes to coursework	Optional content
Component 1 Human Lifespan and Development: Learning Aim A Factors from each of the three categories given in the teaching content must be included with at least **one** each from the Physical and Social/Cultural Component 2 Health and Social Care Services and Values: Require learners to find information on suitable services for **one** individual with Health and Social Care needs assessing how well the services met their needs.	*N/A*
Support materials	
N/A	
Advance Information	
N/A	

Subject: Mathematics Exam board: EDEXCEL

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	N/A

Support materials

In the exam there you will be given a formula sheet (Links: Foundation, Higher)

All students have individual logins to the Hegarty Maths Website (https://hegartymaths.com/).

The Just Maths website (https://online.justmaths.co.uk/) has a generic login for all students. This is JOGStudent and the password is JOG.

Advance Information:

Below you can find the topics specifically mentioned by the exam board for each paper along with Hegarty clips (to both the lesson and the quiz) and, where possible, links to sets of related questions and/or examples on each topic on Just Maths.

In addition to these topics, the exam board has stated that you may be required to demonstrate knowledge of other content in problem solving situations. This could mean any other topic on the syllabus could come up on the exam

Foundation Tier:

Foundation Paper 1

	Topics	Hegarty Clip Number	Just Maths
Arithmetic	Money	743 – 754	**Money (MS)**
	Negative number	37 – 44	**Negative Numbers (MS)**
Fractions	Order fractions, decimals, percentages	52, 55, 73 – 76, 82, 83, 149	**Order FDP (MS)**
	Fraction of an amount	77	**Fraction of an Amount (MS)**
	Fraction arithmetic	65 – 70, 80	**Fraction Arithmetic (MS)**
Properties	Place value	13, 45	**Place value (MS)**
	Product of prime factors	29, 30, 32, 35	**Product of Prime Factors (MS)**
Standard form	Conversion	122, 123, 124	**Conversion (MS)**
	Calculation	125, 126, 127	**Calculation (MS)**
Approximation and Estimation	Estimation	131	https://online.justmaths.co.uk/70-estimation/
Manipulation	Simplification	156 – 159, 173, 174	https://online.justmaths.co.uk/22-expand-simplify/
	Substitute values	155, 278, 780 – 783	

Equations and inequalities	Linear inequality	265 – 272	**Linear Inequality (MS)**
	Quadratic equation	230, 234	
Graphs	Quadratic graph	251 – 255	https://online.justmaths.co.uk/33-non-linear-graphs/
Sequences	Linear sequence	196, 197, 198	https://online.justmaths.co.uk/69-sequences/
Conversion	Length	692, 693, 694, 705, 706	
Percentages	Percentage of an amount	84, 85, 86	
	Percentage increase	88, 91, 92, 94, 97, 98	
Ratio	Write as a ratio	328, 329	https://online.justmaths.co.uk/16-ratio-1/
	Share in a ratio	332 – 335	
Proportion	Direct proportion	339, 340, 341, 343, 344, 345, 348, 739 – 742	https://online.justmaths.co.uk/75-direct-proportion/ https://online.justmaths.co.uk/18-proportion-recipes/
Compound Measures	Speed	716 – 724	
	Density	725 – 729, 731	
Shape	Reflection	639, 640, 641	https://online.justmaths.co.uk/64-reflections/
	Plan and elevation	837 – 844	https://online.justmaths.co.uk/54-plans-elevations/
Angles	Angles in a polygon	560 – 565	https://online.justmaths.co.uk/47-interior-exterior-angles/
Length, area, and volume	Volume of a cube	568, 569	https://online.justmaths.co.uk/59-surface-area-volume-1/
	Volume of a cylinder	572, 573, 574	
Pythagoras's Theorem and Trigonometry	Exact trigonometric values	845	**Exact trigonometric values (MS)** https://online.justmaths.co.uk/39-pythagoras-theorem-1/
Probability	Probability	349 – 363	https://online.justmaths.co.uk/50-probability/
	Frequency tree	368, 369	https://online.justmaths.co.uk/02-frequency-trees/
Diagrams	Pictogram	426	
	Bar chart	425	
	Stem and leaf diagram	430 – 433	

Foundation Paper 2

	Topics	Hegarty Clip Number	Just Maths
Arithmetic	Money	743 – 754	**Money (MS)**
	Negative number	37 – 44	**Negative Numbers (MS)**
Fractions	Fraction arithmetic	65 – 70, 80	**Fraction Arithmetic (MS)**
	Order fractions	60	**Order Fractions (MS)**

Properties	Order integers	14, 37	**Order integers**
	Multiples	33	**Multiples (MS)**
Approximation and Estimation	Rounding	17, 56, 130, 133	https://online.justmaths.co.uk/09-rounding-error-intervals/
	Error interval	774 – 777	
Other	Mathematical symbols	14	
Manipulation	Simplification	156 – 159	
	Expansion of bracket	160, 161	
	Factorisation	168 – 171, 223, 224	
	Laws of indices	173, 174	https://online.justmaths.co.uk/21-index-laws/
Equations and inequalities	Linear simultaneous equations	190 – 195, 218, 219	https://online.justmaths.co.uk/73-simultaneous-equations-1/
Graphs	Coordinates	199, 200	
	Straight line graph	205 – 213	
Functions	Number machines	176, 177	
Conversions	Mass, time, area	695, 696, 697, 700, 701, 705, 706, 709, 710, 711	
	Scale drawing	864 – 871	
Percentages	Decimal to percentage	55	
	Percentage profit	760, 761	
	Depreciation	95	
Ratio	Write as a ratio	328, 329	https://online.justmaths.co.uk/16-ratio-1/
	Use of ratio	335 – 338	
Proportion	Direct proportion	339, 340, 341, 343, 344, 345, 348, 739 – 742	https://online.justmaths.co.uk/07-proportion-best-value/ https://online.justmaths.co.uk/18-proportion-recipes/
	Currency conversion	707, 708	
Shape	Polygons	822 – 828	
	Circles	592	
	Parallel and perpendicular lines	821	
	Transformations	637 – 645, 648 – 654	
Angles	Angles in a triangle	484 – 491	
	Vertically opposite angles	480	
Length, area, and volume	Area of a rectangle	553, 554, 555	
Probability	Tree diagram	361, 362, 363	https://online.justmaths.co.uk/51-probability-trees-1/
	Combined events	358, 359, 360	

Diagrams	Interpret graph	425 – 433, 450 – 454	
	Two-way table	422, 423, 424	
	Frequency table	401, 402, 403	
Measures	Mode	404, 415, 419, 420	https://online.justmaths.co.uk/26-averages/ https://online.justmaths.co.uk/27-averages-from-a-table/ https://online.justmaths.co.uk/28-averages-from-grouped-data/
	Median	409, 416, 419, 420	
	Mean	405 - 408, 417, 419, 420	

Foundation Paper 3

	Topics	Hegarty Clip Number	Just Maths
Arithmetic	Four operations	18 – 24, 47 – 51, 143 – 146	**Four Operations (MS)**
	Negative number	38 – 44	**Negative Numbers (MS)**
Fractions	Fraction of an amount	77	**Fraction of an Amount (MS)**
	One amount as a fraction of another	62	**One Amount as a Fraction of Another (MS)**
	Equivalent fractions	59, 61	**Equivalent fractions (MS)**
Properties	Factors	27	**Factors (MS)**
	Lowest Common Multiple	34, 35, 36	**Lowest Common Multiple (MS)**
Powers and roots	Square root	101	
Approximation	Rounding	17, 56, 130, 133	
Other	Calculator use	129	**Calculator Use (MS)**
Manipulation	Simplification	156 – 159, 173, 174	
	Expansion of bracket	160, 161	
	Factorisation	168 – 171, 223, 224	
	Substitute values	155, 278, 780 – 783	
	Change subject of a formula	280 – 287	https://online.justmaths.co.uk/25-subject-of/
	Forming an expression	151, 152, 153	https://online.justmaths.co.uk/21-5-solving-equations/
Equations	Linear equation	177 – 186, 188, 189	
	Form an equation	176	https://online.justmaths.co.uk/21-5-solving-equations/
Sequences	Linear sequence	196, 197, 198	https://online.justmaths.co.uk/69-sequences/
Conversion	Time	709, 710, 711	
	Compound units	724, 731, 737, 738	
	Scale drawings	864 – 871	

Percentages	Percentage to fraction	82	
	One quantity as a percentage of another	62, 76	
	Percentage increase	90, 91, 92, 94, 97, 98	
	Reverse percentage	96	https://online.justmaths.co.uk/13-reverse-percentages/
Ratio	Write as a ratio	328, 329	https://online.justmaths.co.uk/16-ratio-1/
	1 : *n* form	331	
Proportion	Direct proportion	339, 340, 341, 343, 344, 345, 348, 739 – 742	https://online.justmaths.co.uk/07-proportion-best-value/ https://online.justmaths.co.uk/18-proportion-recipes/
Compound Measures	Average speed	722, 876, 877	
Shape	Triangle properties	823	
	Quadrilaterals	824, 825, 826	
	Triangular prism	829, 830	
Angles	Angle properties of parallel lines	481, 482, 483, 490, 491	https://online.justmaths.co.uk/46-alternate-corresponding-angles/
	Angles in a triangle	484 – 491	
	Vertically opposite angles	480	
	Bearings	492 – 496, 869	https://online.justmaths.co.uk/44-bearings/
Area	Area of a triangle	557, 558	
	Area of a trapezium	559	
Pythagoras's Theorem	Pythagoras's Theorem	498, 499, 501, 502	https://online.justmaths.co.uk/39-pythagoras-theorem-1/
Probability	Probability scale	349, 350	
	Probability	351 – 363	https://online.justmaths.co.uk/50-probability/
Diagrams	Frequency polygon	441	
Measures	Median	409, 416, 419, 420	
	Range	410, 414, 419, 420	
Population	Comparison of distributions	432, 433	

Higher Tier:

Higher Paper 1

	Topics	Clip Number	Just maths links
Fractions	Fraction of an amount	77	Fraction of an Amount (MS)
	Fraction arithmetic	65 – 70, 80	Fraction Arithmetic (MS)
	Recurring decimal to fraction	53, 54	Recurring Decimal to Fraction (MS)
Properties	Product of prime factors	29, 30, 32, 35	Product of Prime Factors (MS)
	Negative and fractional indices	104 – 110	Negative and Fractional Indices (MS)
Powers and roots	Simplification of surds	113 – 119	Simplification of Surds (MS)
Standard form	Conversion	122, 123-124	Conversion (MS)
	Calculation	125, 126, 127	Calculation (MS)
Manipulation	Simplification	156 – 159, 173 - 175	
	Expansion of brackets	160 – 166	
	Algebraic fractions	159, 170, 172, 229	
Equations and inequalities	Linear inequality	265 – 272	https://online.justmaths.co.uk/05-inequalities/
	Form an equation	176	
	Quadratic equation	230 – 234, 238 – 242, 244, 245	
	Equation of a tangent to a circle	320	
Graphs	Quadratic graph	251 – 257, 260	https://online.justmaths.co.uk/33 - non-linear-graphs/
	Speed-time graph	880 – 886	
	Gradients of parallel and perpendicular lines	214, 215	
	Gradient of a curve	887 – 890	
Percentages	Percentage of an amount	84, 85, 86	
Ratio	Write as a ratio	328, 329	https://online.justmaths.co.uk/16 - ratio-1/
	Use of ratio	335 – 338	
	Share in a ratio	332 – 335	
	Ratio to fraction	330	

Proportion	Equations of proportion	343 – 347	https://online.justmaths.co.uk/75-direct-proportion/
Compound Measures	Density	725 – 733	
Angles	Angles in a polygon	560 – 565	https://online.justmaths.co.uk/47-interior-exterior-angles/
Length, area and volume	Area of a triangle	557, 558	
	Volume of a cube	568, 569, 583	https://online.justmaths.co.uk/59-surface-area-volume-1/
	Surface area of a cuboid	584, 589, 590	
	Area of a sector	546, 547	https://online.justmaths.co.uk/58-arcs-sectors/
Pythagoras's Theorem and Trigonometry	Pythagoras's Theorem	497 – 507	https://online.justmaths.co.uk/39-pythagoras-theorem-1/
	Exact trigonometric values	845	**Exact trigonometric values (MS)**
Vectors	Vector geometry	628 – 636	https://online.justmaths.co.uk/68-vectors/
Probability	Probability	351 – 359	https://online.justmaths.co.uk/50-probability/
	Independent combined events	360 – 363	https://online.justmaths.co.uk/51-probability-trees-1/
Diagrams	Cumulative frequency graph	437 – 440	
Measures	Mean	405 – 408, 417 – 421	
	Inter-quartile range	412	

Higher Paper 2

	Topics	Clip Number	Just maths links
Approximation and estimation	Error interval	774 – 777	
Other	Use of a calculator	129	
Manipulation	Simplification	156 – 159	
	Expansion of bracket	160, 161	
	Factorisation	168 – 171, 223 – 228	
	Laws of indices	173, 174,175	https://online.justmaths.co.uk/21-index-laws/

Equations and inequalities	Linear equation	177 – 189	
	Equations of parallel lines	214	
	Form an equation	176	
	Quadratic inequality	277	
Graphs	Coordinates	199, 200	
	Transformations of function	307 – 313	
	Graphs of trigonometric functions	303 – 306	
Functions	Inverse and composite functions	293 – 297	
Conversions	Area	700, 701	
Percentages	Depreciation	95, 808 – 811	
Ratio	Use of ratio	335 – 338	https://online.justmaths.co.uk/16-ratio-1/
			https://online.justmaths.co.uk/17-ratio-2/
Proportion	Direct proportion	339 – 341	https://online.justmaths.co.uk/75-direct-proportion/
		343 – 345 348, 739 - 742	
	Currency conversion	707, 708	
	Inverse proportion	342, 346 – 347, 348	
Compound Measures	Pressure	734 – 737	
Shape	Transformations	637 – 657	
Angles	Circle theorems	593 – 606, 816 - 820	
Length, area and volumes	Area of a rectangle	554, 555	
	Volume of composite solid	582	https://online.justmaths.co.uk/59-surface-area-volume-1/
			https://online.justmaths.co.uk/60-surface-area-volume-2/
Pythagoras's Theorem and Trigonometry	Sine and Cosine Rules	521 – 533	https://online.justmaths.co.uk/45-pythagoras-with-trig/
Probability	Venn diagram	372 – 380	https://online.justmaths.co.uk/53-venn-diagrams/
	Probability from a Venn diagram	383 – 388, 391	https://online.justmaths.co.uk/50-probability/
Diagrams	Box plot	434, 435, 436, 440	
Measures	Lower and upper quartiles	411	
Populations	Compare distributions	432, 433, 436, 439	
	Capture-recapture method	872, 873	

Higher Paper 3

	Topics	Clip Number	Just maths links
Arithmetic	Negative number	38 – 44	
Properties	Laws of indices	102 – 110	https://online.justmaths.co.uk/21-index-laws/
Approximation and estimation	Bounds	137, 138, 139	
Other	Product rule for counting	671, 672, 673	
Manipulation	Simplification	156 – 159, 173, 174, 175	https://online.justmaths.co.uk/22-expand-simplify/
	Expansion of bracket	160, 161	
	Substitute values	278, 279, 780 – 789	
	Difference of two squares	165, 224, 225	
	Expansion of brackets	160 – 166	https://online.justmaths.co.uk/22-expand-simplify/
	Change subject of a formula	280 – 287	https://online.justmaths.co.uk/25-subject-of/
	Forming an expression	151, 152, 153	https://online.justmaths.co.uk/21-5-solving-equations/
	Algebraic fractions	159, 170, 172, 229	
Equations and inequalities	Set up and solve equation	188	https://online.justmaths.co.uk/21-5-solving-equations/ https://online.justmaths.co.uk/21-5-solving-equations/
	Simultaneous equations linear/quadratic	190 – 195, 218, 219, 246, 259	https://online.justmaths.co.uk/73-simultaneous-equations-1/ https://online.justmaths.co.uk/74-simultaneous-equations-2/
Graphs	Gradient of a straight- line graph	201 – 204, 207, 210	https://online.justmaths.co.uk/34-coordinate-geometry-1/
Conversions	Time	709, 710, 711	
Percentages	Percentage decrease	90, 91, 92, 97	
	Depreciation	95, 808 – 811	
	Reverse percentage	96	https://online.justmaths.co.uk/13-reverse-percentages/

Ratio	Write as a ratio	328, 329	https://online.justmaths.co.uk/16-ratio-1/ https://online.justmaths.co.uk/17-ratio-2/
	1 : *n* form	331	
	Share in a ratio	332 – 335	https://online.justmaths.co.uk/16-ratio-1/
Proportion	Direct proportion	339 – 341 34 - 345, 348, 739 –742	https://online.justmaths.co.uk/75-direct-proportion/
Compound Measures	Average speed	716 – 724, 876, 877	
Growth and decay	General iterative processes	322	
Angles	Circle theorems	593 – 606, 816 – 820	
	Area of a trapezium	559	
Length, area and volume	Similar triangles	611, 612, 613	https://online.justmaths.co.uk/62-similar-shapes/
Pythagoras's Theorem and Trigonometry	Pythagoras's Theorem	497 – 507	https://online.justmaths.co.uk/39-pythagoras-theorem-1/
	Trigonometry	508 – 515	
	Trigonometry in 3-D	854 – 863	
Vectors	Column vectors	623 – 627	https://online.justmaths.co.uk/68-vectors/
Probability	Dependent combined events	364 – 367	https://online.justmaths.co.uk/52-probability-trees-2/
Diagrams	Frequency polygon	441	
	Histogram	442 – 449	

Subject: Media Studies

Exam board: AQA

Level of qualification: **GCSE**

Changes to NEA	Optional content
• As well as accepting the submission of final products, AQA will also accept submission of prototypes/mock-ups with supporting evidence. • AQA have removed the current restriction on the use of non-original images, as these could form part of a valid supporting evidence of submissions. • The briefs have been amended to give you additional guidance on prototypes/mock-ups, and the required supporting evidence. More information can be found here: https://www.aqa.org.uk/subjects/media-studies/gcse/media-studies-8572	*N/A*

Support materials:
N/A in exams

Advance Information
This advance information covers all examined components. • For each paper the list shows the media forms/close study products (CSPs) assessed. • Assessment of unseen products will still occur. • Assessment of all four areas of the theoretical framework and contexts will still occur in both papers

Some content has been removed. ***You will now be assessed on the following CSPs only:***

Media One:

Section A

Magazine – Tatler

Advertising and Marketing – Galaxy

Section B

OSP/Video Games – Lara Croft Go

Music Video – One Direction and Arctic Monkeys

Media Two

Section A

All Television – Class (screened extract) and Dr Who

Section B

All Newspapers – Daily Mirror and The Times

Subject: GCSE Music Exam board: Eduqas

Level of qualification:

Changes to coursework	Optional content
Component 1 – Performing: One piece of music lasting a minimum of 1 minute 30 seconds **Component 2 – Composing**: One composition set to your own brief lasting a minimum of 2 minutes	*N/A*

Support materials
N/A in exams Africa Revision notes: https://resource.download.wjec.co.uk/vtc/2019-20/WJEC19-20_1-10/pdf/eduqas-toto-africa-notes-update-08-20.pdf Badinerie Revision notes: https://resource.download.wjec.co.uk/vtc/2019-20/WJEC19-20_1-9/pdf/eduqas-bach-badinerie-notes.pdf

Advance Information
Component 3 – Listening and Appraising Exam: The extracts will focus on the following genres/styles within each area of study: Prepared extracts - Set works questions will focus on: • Section B of the Badinerie • The second verse and chorus of Africa Unprepared extracts will be in the following genres: • Romantic music • Vocal ensembles • Film music • Pop The extended response (10 mark question) will be in Area of Study 3, Music for Film The dictation question will require candidates to notate pitch only. All details on the advanced information for GCSE Music can be found here: https://www.eduqas.co.uk/umbraco/surface/blobstorage/download?nodeId=39549

Subject: Photography

Exam board: Edexcel

Level of qualification: GCSE

Changes to coursework	Optional content
Students only complete one main portfolio. This includes a sketchbook of work and a final piece. The main theme for this project has been Fragments.	Students can also include the first course work project Force from year 10 as extra work

Support materials

N/A but the timeline is:

- Friday 1st April – Sketchbook deadline – books handed in C1 by 2pm
- WB 4th April - students start final piece
- 9th April- 24th April Easter holiday
- WB 25th April students working on final piece
- Tuesday 3rd May - art/photo Exam (this is an inset day) students need to be in by 830am
- Friday 13th May - final piece deadline, hand in by 2pm
- Friday 27th May - Final hand in – end of course

Advance Information

N/A

Some further useful info

https://qualifications.pearson.com/en/qualifications/edexcel-gcses/art-and-design-2016/summer-2022-support.html

https://qualifications.pearson.com/content/dam/pdf/GCSE/Art%20and%20Design/2016/teaching-and-learning-materials/gcse-art-and-design-2022-faqs.pdf

Subject: Physics - Triple

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*N/A*

Support materials

Students will have access to a revised equation sheet which will cover all of the physics equations required in the subject content. This can be found here:
https://filestore.aqa.org.uk/resources/physics/AQA-8463-ES-INS.PDF

All details on advanced information for GCSE Physics can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8463-AI-22.PDF

Advance Information

GCSE Physics

Major focus	G
Could be in	A
Not assessed	R

Paper 1

Spec points	H	F
4.1.1 Energy changes in a systems, and the ways energy is stored before and after such changes	G	G
4.1.2 Conservation and dissipation of energy	G	G
4.1.3 National and global energy resources	A	A
4.2.1 Current, potential difference and resistance	R	G
4.2.2 Series and parallel circuits	R	A
4.2.3 Domestic uses and safety	R	R
4.2.4 Energy transfers	G	A
4.2.5 Static electricity	A	G
4.3.1 Changes of state and particle model	G	G
4.3.2 Internal energy and energy transfers	G	G
4.3.3 Particle model and pressure	R	R
4.4.1 Atoms and isotopes	R	R
4.4.2 Atoms and nuclear radiation	A	G
4.4.3 Hazards and used of radioactive emissions and of background radiation	R	A
4.4.4 Nuclear fission and fusion	R	R

Required practical's that will be assessed in H and F:
Required practical 2: effectiveness of thermal insulators and factors that may affect the thermal insulation properties of a material
Required practical 5: Determining the densities of regular and irregular solid objects and liquids

Physics paper 2

Spec points	H	F
4.5.1 Forces and their interactions	G	G
4.5.2 Work done and energy transfers	G	G
4.5.3 Forces and elasticity	G	A
4.5.4 Moments, levers and gears	R	R
4.5.5 Pressure and pressure differences in fluids	G	A
4.5.6.1 Describing motion along a line	G	G
4.5.6.2 Forces, accelerations and Newton's Laws of motion	A	R
4.5.6.3 Forces and braking	A	R
4.5.7 Momentum	G	A
4.6.1 Waves in air, fluids and solids	G	G
4.6.2 Electromagnetic waves	R	G
4.6.3 Black body radiation	R	R
4.7.1 Permanent and induced magnetism, magnetic forces and fields	R	A
4.7.2 The motor effect	A	A
4.7.3 Induced potential, transformers and the National Grid	A	A
4.8.1 Solar system; stability of orbital motions; satellites	G	G
4.8.2 Red-Shift	G	R

Required practical that will be assessed in H and F:
Required practical 9: investigate the reflection of light by different types of surface and the refraction of light by different substances

Subject: Religious Studies

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*N/A*

Support materials
N/A in exam *Support materials and guidance have been given to the group. Year 11 can contact their class teacher directly if they need further signposting.*

Advance Information
The exam board have given further guidance in terms of the two exam papers. When looking through the guidance, year eleven should be mindful that the two religions of study are Christianity and Islam (not the other religions included in the text). AQA have been a little more explicit in terms of the religious beliefs and practices that are needed for the exam. In terms of paper two (the themes paper), there have been no changes. All details on advanced information for religious studies can be found here: https://filestore.aqa.org.uk/content/summer-2022/AQA-8062-AI-22.PDF

Subject: Combined Science

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	*N/A*

Support materials

Advanced information for GCSE Combined Science can be found here:
https://filestore.aqa.org.uk/content/summer-2022/AQA-8464-AI-22.PDF

Students will have access to a revised equation sheet which will cover all of the physics equations required in the subject content. This can be found here: https://filestore.aqa.org.uk/resources/physics/AQA-8463-ES-INS.PDF

Advance Information

Major focus	G
Could be in	A
Not assessed	R

Biology ***Paper 1***

Spec points	**H**	**F**
4.1. CELL BIOLOGY		
4.1.1 CELL STRUCTURE		
4.1.1.1 Eukaryotes & Prokaryotes	A	A
4.1.1.2 Animal & Plant Cells	A	A
4.1.1.3 Cell Specialisation	A	A
4.1.1.4 Cell Differentiation	A	A
4.1.1.5 Microscopy	R	A
4.1.2 CELL DIVISION		
4.1.2.1 Chromosomes	G	G
4.1.2.2 Mitosis and the Cell Cycles	G	G
4.1.2.3 Stem Cells	G	G
4.1.3 TRANSPORT IN CELLS		
4.1.3.1 Diffusion	R	A
4.1.3.2 Osmosis	R	R
4.1.3.3 Active Transport	R	R
4.2 ORGANISATION		
4.2.1 PRINCIPLES OF ORGANISATION	A	A
4.2.2 ANIMAL TISSUES, ORGANS & ORGAN SYSTEMS		
4.2.2.1 The Human Digestive System	G	G
4.2.2.2 The Heart & Blood Vessels	G	G
4.2.2.3 Blood	G	G
4.2.2.4 Coronary heart Disease: a non-communicable disease	G	R
4.2.2.5 Health Issues	G	G
4.2.2.6 The effect of Lifestyle on some non communicable diseases	G	G
4.2.2.7 Cancer	G	G
4.2.3 PLANT TISSUES ORGANS & SYSTEMS		
4.2.3.1 Plant Tissues	R	A
4.2.3.2 Plant Organ Systems	R	A
4.3 INEFECTION & RESPONSE		
4.3.1 COMMUNICABLE DISEASES		

4.3.1.1 Communicable (infectious) Diseases	A	G
4.3.1.2 Viral Diseases	R	G
4.3.1.3 Bacterial Diseases	A	G
4.3.1.4 Fungal Diseases	R	G
4.3.1.5 Protist Diseases	R	G
4.3.1.6 Human Defence Systems	R	G
4.3.1.7 Vaccinations	A	G
4.3.1.8 Antibiotics & Painkillers	A	G
4.3.1.9 Discovery and development of drugs	A	G
4.4 BIOENERGETICS		
4.4.1 PHOTOSYNTHESIS		
4.4.1.1. Photosynthetic Reaction	G	G
4.4.1.2 Rate of Photosynthesis	G	G
4.4.1.3 Uses of Glucose from Photosynthesis	R	R
4.4.2 RESPIRATION		
4.4.2.1 Aerobic & Anaerobic Respiration	A	R
4.4.2.2 Response to Exercise	R	R
4.4.2.3 Metabolism	A	R

Required practical's that will be assessed in F:	**Required practical's that will be assessed in H:**
Required practical activity 1, 3, 5	Required practical activity 3, 4, 5

Paper 2 Biology

Spec points	**H**	**F**
4.5 HOMEOSTATSIS & RESPONSE		
4.5.1 HOMEOSTASIS	A	A
4.5.2 THE HUMAN NERVOUS SYSTEM	R	R
4.5.3 HORMONAL COORDINATION IN HUMANS		
4.5.3.1 Human Endocrine System	G	G
4.5.3.2 Control of blood glucose concentration	G	G
4.5.3.3 Hormones in human reproduction	G	R
4.5.3.4 Contraception	R	R
4.5.3.5 The use of Hormones to treat infertility (HT Only)	G	R
4.5.3.6 Feedback system (HT Only)	G	R
4.6 INHERITANCE, VARIATION & EVOLUTION		
4.6.1 REPRODUCTION		
4.6.1.1 Sexual & Asexual reproduction	R	R
4.6.1.2 Meiosis	A	R
4.6.1.3 DNA & Genome	R	G
4.6.1.4 Genetic Inheritance	R	G
4.6.1.5 Inherited Disorders	A	G
4.6.1.6 Sex Determination	R	R
4.6.2 VARIATION AND EVOLUTION		
4.6.2.1 Variation	R	R
4.6.2.2 Evolution	R	R
4.6.2.3 Selective Breeding	R	R
4.6.2.4 Genetic Engineering	R	A
4.6.3 THE DEVELOPMENT OF GENETICE AND EVOLUTION		

4.6.3.1 Evidence for Evolution	R	A
4.6.3.2 Fossils	R	A
4.6.3.3 Extinction	R	R
4.6.3.4 Resistant Bacteria	R	R
4.6.4 CLASSIFICATION OF LIVING ORGANISMS	A	A
4.7 ECOLOGY		
4.7.1 ADAPTATION, INTERDEPENDENCE & COMPETITION		
4.7.1.1 Communities	A	G
4.7.1.2 Abiotic Factors	A	G
4.7.1.3 Biotic Factors	A	G
4.7.1.4 Adaptations	R	R
4.7.2 ORGANISATION OF AN ECOSYSTEM		
4.7.2.1 Levels of Organisation	G	G
4.7.2.2 How materials are cycled	G	G
4.7.3 BIODIVERSITY & EFFECT OF HUMAN INTERACTION ON ECOSYSTEMS		
4.7.3.1 Biodiversity	G	R
4.7.3.2 Waste Management	G	A
4.7.3.3 Land Use	R	R
4.7.3.4 Deforestation	R	R
4.7.3.5 Global warming	G	R
4.7.3.6 Maintaining Biodiversity	G	R

Required practical that will be assessed in F & H:
Required practical activity 7: measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species

Chemistry ***Paper 1***

Spec points	**H**	**F**
5.1 ATOMIC STRUCTURE & PERIODIC TABLE		
5.1.1 A SIMPLE MODEL OF ATOM, SYMBOLS & RELATIVE ATOMIC MASS		
5.1.1.1 Atoms, Elements and Compounds	A	A
5.1.1.2 Mixtures	A	A
5.1.1.3 The Development of the Model of the Atom	A	A
5.1.1.4 Relative electrical Charge of subatomic particles	A	A
5.1.1.5 Size & Mass of atoms	A	A
5.1.1.6 Relative Atomic Mass	A	A
5.1.1.7 Electronic Structure	A	A
5.1.2 THE PERIODIC TABLE		
5.1.2.1 The Periodic Table	A	G
5.1.2.2 Development of the Periodic Table	A	G
5.1.2.3 Metals & Non- Metals	A	G
5.1.2.4 Group 0	A	G
5.1.2.5 Group 1	A	G
5.1.2.6 Group 7	A	G
5.2 BONDING, STRUCTURE & THE PROPERTIES OF MATTER		
5.2.1 CHEMICAL BONDS, IONIC, COVALENT & METALLIC		
5.2.1.1 Chemical Bonds	A	A
5.2.1.2 Ionic Bonds	A	A

5.2.1.3 Ionic Compounds	A	A
5.2.1.4 Covalent Bonding	A	A
5.2.1.5 Metallic Bonding	A	A
5.2.2 HOW BONDING % STRCUTURE ARE RELATED TO PROPERTIES OF SUBSTANCES		
5.2.2.1 The three states of Matter	G	G
5.2.2.2 State Symbols	G	G
5.2.2.3 Properties of Ionic Compounds	G	G
5.2.2.4 Properties of small Molecules	G	G
5.2.2.5 Polymers	G	G
5.2.2.6 Giant Covalent Structures	G	G
5.2.2.7 Properties of metals & Alloys	G	G
5.2.2.8 Metals as conductors	G	G
5.2.3 STRUCTURE & BONDING OF CARBON		
5.2.3.1 Diamond	A	G
5.2.3.2. Graphite	A	G
5.2.3.3 Graphene & Fullerenes	A	G
5.3 QUANTITATIVE CHEMISTRY		
5.3.1 CHEMICAL MEASUREMENTS, CONSERVATION OF MASS & THE QUANTITATIVE INTERPRETATION		
5.3.1.1 Conservation of mass & Balanced chemical equations	A	A
5.3.2.2 Relative Formula Mass	A	A
5.3.1.3 Mass Changes when a reactant or product is a gas	A	A
5.3.1.4 Chemical Measurements	A	A
5.3.2 USE OF AMOUNT OF SUBSTANCE IN RELATION TO MASS OF PURE SUBSTANCES		
5.3.2.1 Moles (HT Only)	G	R
5.3.2.2 Amount of substance equations (HT Only)	G	R
5.3.2.3 Using Moles to balance equations (HT Only)	G	R
5.3.2.4 Limiting reactants (HT Only)	G	R
5.3.2.5 Concentrations of Solutions	G	R
5.4 CHEMICAL CHANGES		
5.4.1 REACTIVITY OF METALS		
5.4.1.1 Metal Oxides	G	G
5.4.1.2 The Reactivity series	G	G
5.4.1.3 Extraction of metals & reduction	G	G
5.4.1.4 Oxidation & Reduction in terms of electrons (HT Only)	G	R
5.4.2 REACTIONS OF ACIDS		
5.4.2.1 Reactions of Acids with Metals	G	G
5.4.2.2 Neutralisation of acids and Salt Production	G	G
5.4.2.3 Soluble Salts	G	G
5.4.2.4 The pH Scale & Neutralisation	G	G
5.4.2.4 Strong & Weak acids (HT Only)	G	R
5.4.3 ELECTROLYSIS		
5.4.3.1 The process of Electrolysis	G	G
5.4.3.2 Electrolysis or Molten Ionic Compounds	G	G
5.4.3.3 Using Electrolysis to extract Metals	G	G
5.4.3.4 Electrolysis of Aqueous Solutions	G	G
5.5 ENERGY CHANGES		
5.5.1 EXOTHERMIC & ENDOTHERMIC REACTIONS		
5.5.1.1 Energy Transfer during Exo & Endothermic Reactions	G	A
5.5.1.2 Reaction Profiles	G	A
5.5.1.3 The energy change of reactions (HT Only)	G	R

Required practical's that will be assessed in F & H:
Required practical activity 8: preparation of a pure, dry sample of a soluble salt from an insoluble oxide or carbonate, using a Bunsen burner to heat dilute acid and a water bath or electric heater to evaporate the solution.
Required practical activity 9: investigate what happens when aqueous solutions are electrolysed using inert electrodes. This should be an investigation involving developing a hypothesis.
Required practical activity 10: investigate the variables that affect temperature changes in reacting solutions such as, eg, acid plus metals, acid plus carbonates, neutralisations, displacement of metals

Paper 2 Chemistry

Spec points	**H**	**F**
5.6 THE RATE & EXTENT OF CHEMICAL CHANGE		
5.6.1 RATE OF REACTION		
5.6.1.1 Calculation rates of Reactions	G	G
5.6.1.2 Factors which affect the rates of chemical reactions	G	G
5.6.1.3 Collision Theory & Activation Energy	G	G
5.6.1.4 Catalysts	G	G
5.6.2 REVERSIBLE REACTIONS & DYNAMIC EQUILIBRIUM		
5.6.2.1 Reversible Reactions	G	G
5.6.2.2 Energy changes & Reversible reactions	G	G
5.6.2.3 Equilibrium	G	G
5.6.2.4 The effect of changing condition on equilibrium (HT only)	G	R
5.6.2.5 The effect of changing concentrations (HT Only)	G	R
5.6.2.6 The effect of Temperature changes on Equilibrium (HT Only)	G	R
5.6.2.7 The effect of pressure changes on equilibrium (HT Only)	G	R
5.7 ORGANIS CHEMISTRY		
5.7.1 CARBON COMPOUNDS AS FUELS & FEEDSTOCK		
5.7.1.1 Crude oil, Hydrocarbons and alkanes	G	G
5.7.1.2 Fractional Distillation and Petrochemicals	G	G
5.7.1.3 Properties of hydrocarbons	G	G
5.7.1.4 Cracking & Akenes	G	G
5.8 CHEMICAL ANALYSIS		
5.8.1 PURITY, FORMULATION & CHROMATOGRAPHY		
5.8.1.1 Pure substances	G	G
5.8.1.2 Formulations	G	G
5.8.8.1.3 Chromatography	G	G
5.8.2 IDENTIFATION OF COMMON GASES		
5.8.2.1 Test for Hydrogen	R	A
5.8.2.2 Test for Oxygen	R	A
5.8.2.3 Test for Carbon Dioxide	R	A
5.8.2.4 Test for Chlorine	R	A
5.9 CHMISTRY OF THE ATMOSPHERE		
5.9.1 THE COMPOSITION & EVOLUTION OF THE EARTH'S ATMOSPHERE		
5.9.1.1 The Proportions of different gases in the atmosphere	G	G
5.9.1.2 The Earths Early Atmosphere	G	G
5.9.1.3 How Oxygen increased	G	G
5.9.1.4 How Carbon Dioxide Decreased	G	G
5.9.2 CARBON DIOXIDE & METHANE AS GREENHOUSE GASES		

5.9.2.1 Greenhouse Gases	A	R
5.9.2.2 Human Activities which contribute to greenhouse gases in atmosphere	A	R
5.9.2.3 Global Climate Change	A	R
5.9.2.4 The carbon footprint and its reduction	A	R
5.9.3 COMMON ATMOSPHERIC POLLUTANTS& THEIR SOURCES		
5.9.3.1 Atmospheric pollutants from fuels	A	G
5.9.3.2 Properties & Effects of atmospheric pollutants	A	G
5.10 USING RESOURCES		
5.10.1 USING THE EARTH'S RESOURCES & OBTAINING POTABLE WATER		
5.10.1.1 Using the Earths resources & sustainable development	G	G
5.10.1.2 Potable water	G	G
5.10.1.3 Waste Water treatment	G	G
5.10.1.4 Alternative methods of extracting metals (HT Only)	G	R
5.10.2 LIFE CYCLE ASSESSMENT & RECYCLING		
5.10.2.1 Life cycle assessment	A	A
5.10.2.2 Ways of reducing the use of resources	A	A

Required practical that will be assessed in F & H:
Required practical activity 11: investigate how changes in concentration affect the rates of reactions by a method involving measuring the volume of a gas produced and a method involving a change in colour or turbidity. This should be an investigation involving developing a hypothesis.
Required practical activity 12: investigate how paper chromatography can be used to separate and tell the difference between coloured substances. Students should calculate Rf values.

Physics ***Paper 1***

Spec points	**H**	**F**
6.1 ENERGY		
6.1.1 ENERGY CHANGES IN A SYSTEM, AND THE WAYS ENERGY IS STORED BEFORE AND AFTER SUCH CHANGES		
6.1.1.1 Energy stores and systems	G	G
6.1.1.2 Changes in energy	G	G
6.1.1.3 Energy changes in systems	G	G
6.1.1.4 Power	G	G
6.1.2 CONSERVATION AND DISSIPATION OF ENERGY		
6.1.2.1 Energy transfers in a system	A	A
6.1.2.2 Efficiency	A	A
6.1.3 NATIONAL AND GLOBAL ENERGY RESOURCES	A	G
6.2 ELECTRICITY		
6.2.1 CURRENT, POTENTIAL DIFFERENCE AND RESISTANCE		
6.2.1.1 Standard circuit diagram symbols	A	G
6.2.1.2 Electrical charge and current	A	G
6.2.1.3 Current, resistance and potential difference	A	G
6.2.1.4 Resistors	A	G
6.2.2 SERIES AND PARALLEL CIRCUITS	R	A
6.2.3 DOMESTIC USES AND SAFETY		
6.2.3.1 Direct and alternating potential difference	R	R
6.2.3.2 Mains electricity	R	R
6.2.4 ENERGY TRANSFERS		
6.2.4.1 Power	G	A

6.2.4.2 Energy transfers in everyday appliances	G	A
6.2.4.3 The National Grid	G	A
6.3 PARTICLE MODEL OF MATTER		
6.3.1 CHANGES OF STATE AND THE PARTICLE MODEL		
6.3.1.1 Density of materials	G	G
6.3.1.2 Changes of state	G	G
6.3.2 INTERNAL ENERGY AND ENERGY TRANSFERS		
6.3.2.1 Internal energy	R	A
6.3.2.2 Temperature changes in a system and specific heat capacity	R	A
6.3.2.3 Changes of state and specific latent heat	R	A
6.3.3 PARTICLE MODEL AND PRESSURE		
6.3.3.1 Particle motion in gases	G	R
6.4 ATOMIC STRUCTURE		
6.4.1 ATOMS AND ISOTOPES		
6.4.1.1 The structure of an atom	G	R
6.4.1.2 Mass number, atomic number and isotopes	G	R
6.4.1.3 The development of the model of the atom (common content with chemistry)	G	R
6.4.2 ATOMS AND NUCLEAR RADIATION		
6.4.2.1 Radioactive decay and nuclear radiation	G	G
6.4.2.2 Nuclear equations	G	G
6.4.2.3 Half-lives and the random nature of radioactive decay	G	G
6.4.2.4 Radioactive contamination	G	G

Required practical's that will be assessed in F & H:
Required practical activity 14: an investigation to determine the specific heat capacity of one or more materials. The investigation will involve linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored.
Required practical activity 16: use circuit diagrams to construct appropriate circuits to investigate the I–V characteristics of a variety of circuit elements, including a filament lamp, a diode and a resistor at constant temperature.

Paper 2 Physics

Spec points	**H**	**F**
6.5 FORCES		
6.5.1 FORCES AND THEIR INTERACTIONS		
6.5.1.1 Scalar and vector quantities	G	G
6.5.1.2 Contact and non-contact forces	G	G
6.5.1.3 Gravity	G	G
6.5.1.4 Resultant forces	G	G
6.5.2 WORK DONE AND ENERGY TRANSFER	A	A
6.5.3 FORCES AND ELASTICITY	R	R
6.5.4 FORCES AND MOTION		
6.5.4.1 Describing motion along a line		
6.5.4.1.1 Distance and displacement	G	G
6.5.4.1.2 Speed	G	G
6.5.4.1.3 Velocity	G	G
6.5.4.1.4 The distance–time relationship	G	G
6.5.4.1.5 Acceleration	G	G

6.5.4.2 FORCES, ACCELERATIONS AND NEWTON'S LAWS OF MOTION		
6.5.4.2.1 Newton's First Law	G	G
6.5.4.2.2 Newton's Second Law	G	G
6.5.4.2.3 Newton's Third Law	G	G
6.5.4.3 FORCES AND BRAKING		
6.5.4.3.1 Stopping distance	R	G
6.5.4.3.2 Reaction time	R	G
6.5.4.3.3 Factors affecting braking distance 1	R	G
6.5.4.3.4 Factors affecting braking distance 2	R	G
6.5.5 MOMENTUM (HT ONLY)		
6.5.5.1 Momentum is a property of moving objects	G	R
6.5.5.2 Conservation of momentum	G	R
6.6 WAVES		
6.6.1 WAVES IN AIR, FLUIDS AND SOLIDS		
6.6.1.1 Transverse and longitudinal waves	A	A
6.6.1.2 Properties of waves	A	A
6.6.2 ELECTROMAGNETIC WAVES		
6.6.2.1 Types of electromagnetic waves	G	G
6.6.2.2 Properties of electromagnetic waves 1	G	G
6.6.2.3 Properties of electromagnetic waves 2	G	G
6.6.2.4 Uses and applications of electromagnetic waves	G	G
6.7 MAGNETISM AND ELECTROMAGNETISM		
6.7.1 PERMANENT AND INDUCED MAGNETISM, MAGNETIC FORCES AND FIELDS		
6.7.1.1 Poles of a magnet	R	G
6.7.1.2 Magnetic fields	R	G
6.7.2 THE MOTOR EFFECT		
6.7.2.1 Electromagnetism	G	G
6.7.2.2 Fleming's left-hand rule (HT only)	G	R
6.7.2.3 Electric motors (HT only)	G	R

Required practical that will be assessed in F & H:
Required practical activity 21: investigate how the amount of infrared radiation absorbed or radiated by a surface depends on the nature of that surface.

Subject: Spanish

Exam board: AQA

Level of qualification: GCSE

Changes to coursework	Optional content
N/A	Writing papers will include an additional optional question for the overlap question at both tiers (Question 4/Question 1) and for Higher tier Question 2. This means there will be 3 90-word questions and 3 150-word questions to choose from, rather than 2. This is so students can answer on their preferred theme. For each optional question, the theme will be given in the introduction to the question in the question paper.

Support materials
N/A

Advance Information
There is no Advance Information for Paper 1 (Listening), Paper 2 (Speaking) or Paper 3 (Reading). Therefore all parts of the specification will need to be revised for these papers, as well as for the Paper 4 Writing Translation. On Paper 4 – Writing, at Foundation Tier, on the Theme 3 90-word question there will be no bullet point on Education Post-16. On Paper 4 – Writing, at Higher Tier, on the Theme 1 150-word question there will be no bullet point on Free Time Activities. The full Advance Information document for AQA Spanish GCSE can be found here: https://filestore.aqa.org.uk/content/summer-2022/AQA-8698-AI-22.PDF

Subject: Cambridge National SPORT Exam board: OCR

Level of qualification: Level 2

Changes to coursework	Optional content
There are no changes to this year's Cambridge national course. The only unit which has under gone any changes was R042 that the students completed last year where they were not able to complete the practical element of the course work.	*N/A*
Support materials	
There is no additional content	
Advance Information	
No Advanced information has/will be released for the Cambridge National Sport exams.	