The Ellesmere Port
C of E College

Year 13 Summer Exam Adaptations Information

Part of the
Frank Field
Education Trust

Subject	Biology
Level	A level
Advanced information	**We know that the below topics will be examined in the relevant papers.** Other topics can still be assessed in low mark questions or synoptic questions (questions that span across different topics). **It is a strong recommendation that you still revise all areas of the specification.** For each paper the list shows the major focus of the content of the examinations, the topic area are listed in rank order, with the areas carrying the highest mark allocations at the top of each list
Paper 1 Biological processes H420/01	5.1.5 Plant and animal responses 5.2.2 Respiration (includes practical skills) 5.2.1 Photosynthesis 3.1.3 Transport in plants 5.1.4 Hormonal control 2.1.5 Biological membranes (including practical skills)
Paper 2 Biological diversity H420/02	6.2.1 Cloning and biotechnology (includes practical skills) 2.1.2 Biological molecules 6.3.2 Populations and sustainability 4.2.1 Biodiversity (includes practical skills) 6.1.1 Cellular control 2.1.3 Nucleotides and nucleic acids
Paper 3 Unified biology H420/03	5.1.5 Plant and animal responses 3.1.2 Transport in animals 6.2.1 Cloning and biotechnology 4.1.1 Communicable diseases, disease prevention and the immune system

Subject	Chemistry
Level	A level
Advanced information	**We know that the below topics will be examined in the relevant papers.** Other topics can still be assessed in low mark questions or synoptic questions (questions that span across different topics). **It is a strong recommendation that you still revise all areas of the specification.** For each paper the list shows the major focus of the content of the examinations, the topic area are listed in rank order, with the areas carrying the highest mark allocations at the top of each list
Paper 1 Periodic table, elements and physical chemistry	2.1.3 Amount of substance (includes practical skills) 5.3.1 Transition elements 5.1.3 Acids, bases and buffers (includes practical skills) 3.1.1 Periodicity 3.2.1 Enthalpy changes (includes practical skills) 5.1.1 How fast? 5.2.2 Enthalpy and entropy 2.1.4 Acids (includes practical skills
Paper 2 Synthesis and analytical techniques H432/02	2.1.3 Amount of substance (includes practical skills) 4.1.3 Alkenes 6.3.2 Spectroscopy 6.1.1 Aromatic compounds 6.2.5 Organic synthesis (includes practical skills) 6.1.2 Carbonyl compounds (includes practical skills) 4.1.1 Basic concepts of organic chemistry 4.2.4 Analytical techniques 6.2.3 Polyesters and polyamides
Paper 3 Unified chemistry H432/03	2.1.3 Amount of substance (includes practical skills) 5.2.3 Redox and electrode potentials (includes practical skills) 3.2.3 Chemical equilibrium (includes practical skills) 4.1.1 Basic concepts of organic chemistry 4.2.3 Organic synthesis (includes practical skills) 5.1.3 Acids, bases and buffers 5.2.1 Lattice enthalpy (includes practical skills) 6.2.2 Amino acids, amides and chirality 6.3.2 Spectroscopy

A Level Art

Students will only complete component 1 (Portfolio) only for GCSE Art and Design: Art, Craft and Design. This means that students won't need to start or complete Component 2 (Externally Set Assignment). Students will need to complete Component 1 in the normal way and will be marked out of 96 as usual. The assessment criteria in the specification remains the same.

Subject	Physics
Level	A level
Advanced information	**We know that the below topics will be examined in the relevant papers.** Other topics can still be assessed in low mark questions or synoptic questions (questions that span across different topics). **It is a strong recommendation that you still revise all areas of the specification.** For each paper the list shows the major focus of the content of the examinations, the topic area are listed in rank order, with the areas carrying the highest mark allocations at the top of each list
Paper 1 Modelling Physics 556/01	5.5 Astrophysics and cosmology (includes practical skills) 5.1 Thermal physics 3.2 Forces in action 3.4 Materials (includes practical skills) 5.3 Oscillations
Paper 2 Exploring physics H556/02	4.4 Waves 6.4 Nuclear and particle physics 6.5 Medical imaging 4.5 Quantum physics (includes practical skills) 6.3 Electromagnetism (includes practical skills) 6.1 Capacitors 6.2 Electric fields
Paper 3 Unified physics	4.4 Waves (includes practical skills) 5.3 Oscillations (includes practical skills) 6.1 Capacitors 6.4 Nuclear and particle physics (includes practical skills) 3.2 Forces in action 5.2 Circular motion 5.5 Astrophysics and cosmology

FOCUS OF THE JUNE 2022 EXAM

3.1 Physical geography

Water and carbon cycle

Water and carbon cycles as natural systems

Systems in physical geography: systems concepts and their application to the water and carbon cycles inputs – outputs, energy, stores/components, flows/transfers, positive/negative feedback, dynamic equilibrium.

The carbon cycle

Global distribution, and size of major stores of carbon – lithosphere, hydrosphere, cryosphere biosphere, atmosphere.

Factors driving change in the magnitude of these stores, over time and in space, including flows and transfers at plant, sere and continental scales. Photosynthesis, respiration, decomposition, combustion, carbon sequestration in oceans and sediments, weathering.

Changes in the carbon cycle over time, to include natural variation (including wild fires, volcanic activity) and human impact (including hydrocarbon fuel extraction and burning, farming practices, deforestation, land use changes).

The carbon budget and the impact of the carbon cycle upon land, ocean and atmosphere, including global climate.

Water, carbon, climate and life on Earth

The key role of the carbon and water stores and cycles in supporting life on Earth with particular reference to climate. The relationship between the water cycle and carbon cycle in the atmosphere. The role of feedbacks within and between cycles and their link to climate change and implications for life of Earth.

Human interventions in the carbon cycle designed to influence carbon transfers and mitigate the impacts of climate change.

Coastal systems and landscapes

Coasts as natural systems

Systems in physical geography: systems concepts and their application to the development of coastal landscapes – inputs, outputs, energy, stores/components, flows/transfers, positive/negative feedback, dynamic equilibrium. The concepts of landform and landscape and how related landforms combine to form characteristic landscapes.

Systems and processes

Sources of energy in coastal environments: winds, waves (constructive and destructive), currents and tides. Low energy and high energy coasts.

Sediment sources, cells and budgets.

Geomorphological processes: weathering, mass movement, erosion, transportation and deposition.

Coastal landscape development

This content must include study of a variety of landscapes from beyond the UK but may also include UK examples.

Origin and development of landforms and landscapes of coastal deposition.

Estuarine mudflat/saltmarsh environments and associated landscapes; factors and processes in their development.

Coastlines of emergence and submergence. Origin and development of associated landforms:, fjords,.

Recent and predicted climatic change and potential impact on coasts.

Coastal management

Human intervention in coastal landscapes. Traditional approaches to coastal flood and erosion risk: hard and soft engineering. Sustainable approaches to coastal flood risk and coastal erosion management: shoreline management/integrated coastal zone management.

Case studies

Case study of a contrasting coastal landscape beyond the United Kingdom (UK) to illustrate and analyse how it present risks and opportunities for human occupation and development, and evaluate human responses of resilience, mitigation and adaptation.

Hazards

The concept of hazard in a geographical context

Characteristic human responses – fatalism, prediction, adjustment/adaptation, mitigation, management, risk sharing – and their relationship to hazard incidence, intensity, magnitude, distribution and level of development. ** In relation to WILDFIRES

Plate tectonics

Destructive, constructive and conservative plate margins. Characteristic processes: seismicity and vulcanicity.

Volcanic hazards

The nature of vulcanicity and its relation to plate tectonics: forms of volcanic hazard: nuées ardentes, lava flows, mudflows, pyroclastic and ash fallout, gases/acid rain, tephra. Spatial distribution, magnitude, frequency, regularity and predictability of hazard events.

Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.

Impacts and human responses as evidenced by a recent volcanic event.

Seismic hazards

The nature of seismicity and its relation to plate tectonics: forms of seismic hazard: earthquakes, shockwaves, tsunamis, liquefaction, landslides. Spatial distribution, randomness, magnitude, frequency, regularity, predictability of hazard events.

Impacts: primary/secondary; environmental, social, economic, political. Short and long-term responses; risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.

Impacts and human responses as evidenced by a recent seismic event.

Storm hazards

The nature of tropical storms and their underlying causes. Forms of storm hazard: high winds, storm surges, coastal flooding, river flooding and landslides. Spatial distribution, magnitude, frequency, regularity, predictability of hazard events.

Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.

Impacts and human responses as evidenced by two recent tropical storms in contrasting areas of the world.

Fires in nature

Nature of wildfires. Conditions favouring intense wild fires: vegetation type, fuel characteristics, climate and recent weather and fire behaviour. Causes of fires: natural and human agency. Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses; risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.

Impact and human responses as evidenced by a recent wild fire event.

Paper 1 Breadth study with interpretations
Option 1H: Britain transformed, 1918–97

Sections A and B will draw from the following specification sub-themes:

Themes	Content
1 A changing political and economic environment, 1918–79	• A changing political landscape: changing party fortunes, 1918–31; the National government, 1931–45; Labour government, the rise of consensus politics and political challenge, 1945–79. • Economic challenges in 1918 and post-war boom, crisis and recovery, 1918–39; creating a managed economy, 1939– 51; the response to economic challenges, 1951–79.
2 Creating a welfare state, 1918–79	• Education and widening opportunities: education policy, 1918–43; the significance of the 'Butler Act' 1944, and the development of comprehensive education to 1979; the growth and social impact of university education, 1918–79.
3 Society in transition, 1918–79	• Race and immigration: immigration policies and attitudes towards ethnic minorities, 1918–39; the impact of the Second World War and new Commonwealth immigration; racial controversy and the impact of government policies on race relations and immigration, 1958–79.
4 The changing quality of life, 1918–79	• Changing living standards: the impact of boom, crisis and recovery, and the significance of regional differences, 1918–39; the effects of 'total war' and austerity, 1939–51; the growth of a consumer society, 1951–79. • Popular culture and entertainment: the impact of mass popular culture, including cinema, radio and music, 1918–79; the influence of television from the 1950s and youth culture, 1955–79. • Leisure and travel: the growth of spectator sports from the 1920s; increased leisure time and the development of mass tourism from the 1930s; the impact of car ownership and travel developments, 1918–79.

Section C

The historical interpretation question is a discrete topic, and questions may draw on one or more of the content bullet points, therefore no advance information is supplied for Paper 1 Section C historical interpretations.

Paper 2 Depth study
Option 2H.2: The USA, 1955–92: conformity and challenge

This paper will draw from the following specification sub-topics:

Key topics	Content
1 Affluence and conformity, 1955–63	• Urbanisation and affluence: the changing nature of cities; expansion of the suburbs; highway development; growing ownership and use of cars; white collar jobs and service industries; consumerism and domestic technology. • Kennedy's New Frontier: social welfare and unemployment programmes; environmentalism and expansion of the National Park system; the Peace Corps; the space programme; extent of Kennedy's domestic achievements.
2 Protest and reaction, 1963–72	• Civil rights: the significance of Malcolm X, Black Power and the Black Panthers; King's changing priorities, including the campaigns in Selma and Chicago; King's achievements and the impact of his assassination; the work of Cesar Chavez. • Protest and personal freedom: student protest; counter-culture and its key features; the growth of the women's movement; the impact of sexual liberalisation; the origins of gay rights. • Johnson's Great Society, 1964–68: tackling poverty and unemployment; improving housing and education; Medicare and Medicaid; civil rights laws; Johnson's achievements.
4 Republican dominance and its opponents, 1981–92	• The Religious Right and its critics: the promotion of traditional values; campaigns against abortion and homosexuality; Nancy Reagan's 'Just Say No' campaign; the growth of bitter political divisions and their significance. • Cultural challenge: trends in youth culture; the impact of technology on popular culture; the growth of cable television and the influence of MTV; the impact of the AIDS crisis; controversial social issues in film and television. • Social change: the changing status of ethnic minorities; the impact of black American success in politics, business, sport and popular culture; the extent of racial tolerance and integration by 1992; the impact of women in politics and the workplace; the changing status of women by 1992.

Continue

Paper 3 Themes in breadth with aspects in depth
Option 33: The witch craze in Britain, Europe and North America, c1580–c1750

Section A will draw from the following specification key topic:

Key topic	Content
1 The North Berwick witches in Scotland, 1590–91 and the aftermath to 1597	• The origins of the persecution: Gilly Duncan's confession; the impact of James VI's voyage from Denmark; the extent to which Danish witch hunting influenced events in Scotland. • The widening net: the case of Agnes Sampson and John Fian; the role of the king and torture; the involvement of the Earl of Bothwell; impact of the confessions, trials and executions. • Reasons for the extent of persecutions in Scotland to 1597, including judicial procedures, lack of strong central control, the role of King James and significance of his *Daemonologie*.

Section B will draw from the following specification key topics:

Key topics	Content
2 The Lancashire witches of 1604–13	• The influence of social, economic and religious context of the area around Pendle in the early seventeenth century and the significance of the new witchcraft statute of 1604. • The origins of the case: Alizon Device and John Law; the investigations of Roger Nowell; Old Demdike and Old Chattox and their witchcraft families; the meeting at Malkin Tower. • The trial 1612: the Judges Bromley and Altham; the conduct and outcomes of the trial; impact of Thomas Potts's account.
5 Cotton Mather and the Salem witch hunt, 1692–93	• The social, economic and political context of Salem: weakened authority following the 1688 Revolution; Indian threats and economic crisis; social tensions. • The influence of Cotton Mather, including *Memorable Providences relating to Witchcraft and Possessions*; instigators, including the roles of Samuel Parris, children and Tituba; the nature of the victims; the trials and executions. • Reasons for the ending of the witch hunt: the roles of Cotton Mather's father and Governor Phips; the general pardon.

Section C

The aspects in breadth focuses on long-term changes across the period studied, and the question may draw on one or both of the themes, therefore no advance notice is supplied for Paper 3 Section C aspects in breadth.

Pearson Edexcel Level 3 GCE

May–June 2022 Assessment Window

Syllabus reference **9MA0**

Mathematics

Advanced
Advance Information

You are not permitted to take this notice into the examination.
This document is valid if downloaded from the Pearson Qualifications website.

Instructions

- Please ensure that you have read this notice before the examination.

Information

- This notice covers all examined components.
- The format/structure of the assessments remains unchanged.
- This advance information details the focus of the content of the exams in the May–June 2022 assessments.
- There are no restrictions on who can use this notice.
- This notice is meant to help students to focus their revision time.
- Students and teachers can discuss advance information.
- This document has 5 pages.

Continue ▶

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General advice

- In addition to covering the content outlined in the advance information, students and teachers should consider how to:
  - manage their revision of parts of the specification which may be assessed in areas not covered by the advance information
  - manage their revision of other parts of the specification which may provide knowledge that helps with understanding the areas being tested in 2022.
- For specifications with synoptic assessments, topics not explicitly given in the advance information may appear, e.g. where students are asked to bring together knowledge, skills and understanding from across the specification.
- For specifications with optional papers, students should only refer to the advance information for their intended option.
- For specifications with NEA, advance information does not cover any NEA components.

A link to the Joint Council for Qualifications guidance document on advance information can be found on the Joint Council for Qualifications website or here.

Advance Information

Subject specific section

- For each paper, the lists below show the major focus of the content of the exams.
- Questions will be drawn from one or more of these areas of the specification content.
- The aim should still be to cover all specification content in teaching and learning.
- The information is presented in approximate specification order and not in question order.

Paper 9MA0/01 Pure Mathematics 1

- Formal proof
- The factor theorem
- Understand and use graphs of functions
- Use intersection points of graphs to solve equations
- Transformations of a curve
- Use of functions in modelling
- The coordinate geometry of the circle
- Arithmetic sequences and series
- Differentiation: stationary points, minima. Radian measure
- Trigonometric identities and equations
- Trigonometric functions and identities: area under a curve
- Exponentials: Solving equations, rate of change
- Maximum point; iteration
- Integration as a limit
- Methods of integration
- Use vectors to solve a problem in pure mathematics

Paper 9MA0/02 Pure Mathematics 2

- Formal proof
- The modulus of a linear function
- Understand and use function notation
- The binomial expansion
- Sequence generated by an iterative formula
- Geometric sequences and series; trigonometric identities
- Use of a trigonometric function
- The function a^x and its graph
- Differentiation; roots of equations
- Differentiation from first principles
- Find maximum and minimum points; Newton- Raphson method
- Differentiation of curves defined parametrically
- Area under a curve
- Solution of a first order differential equation; partial fractions
- The trapezium rule
- Use vectors to solve problems in pure mathematics

Paper 9MA0/31 Statistics

- Regression lines (change of variable); hypothesis test for correlation
- Measures of central tendency and variation
- Probability and Venn diagrams
- Discrete probability distributions; normal approximation
- Normal distribution
- Hypothesis testing

Paper 9MA0/32 Mechanics

- Constant acceleration in 2-D and Newton's 2nd law in 2-D using vectors
- Variable acceleration, language of kinematics
- Projectiles, constant acceleration
- Dynamics, resolving forces, friction, equilibrium
- Statics, moments, resolving forces, friction

END OF ADVANCE INFORMATION

EDUQAS A LEVEL ENGLISH LITERATURE AMENDMENTS

Component 1 – Poetry
Section B: Rossetti – range of poems for assessment has been reduced to:

- 'Have you forgotten?'
- 'Sweet Death'
- 'Remember'
- 'From the Antique'
- 'Echo'
- 'A Triad'
- 'Whatsoever is right, that shall ye receive'
- 'An Apple-Gathering'
- 'Up-Hill'
- 'No, Thank You John'
- 'Out of the Deep'
- 'The Queen of Hearts'
- 'Twice'
- 'Memory'
- 'Amor Mundi'
- 'A Daughter of Eve'
- 'Autumn Violets'
- 'They Desire a Better Country'
- 'Confluents'
- 'The Key-Note'
- 'De Profundis'
- 'The Thread of Life'
- 'The Greatest of these is Charity'
- 'Vigil of St Bartholomew'
- 'Who hath despised the day of small things?'
- 'Tune me, O Lord, into one harmony'

Component 2 – Drama
Section A part i Shakespeare King Lear

- Extract will be taken from Act 1.

Component 3 – Unseen texts
Section B Unseen Poetry
List of themes now provided which are relevant to the unseen poems in the poetry section of the paper:

- Conflict
- Ambition
- Natural forces
- Suffering

Design & Technology A Level
Exam board: OCR
Examination Paper 1: Principles of Product Design (H406/01)

This list below shows the topics that will be mainly, although **not** exclusively, tested through the higher mark questions:

1. Identifying requirements	• 1.3 How usability is considered when designing prototypes:
	  ○ The impact of a solution on a user's lifestyle
	  ○ The ease of use and inclusivity of products
	  ○ Ergonomic considerations and anthropometric data
	  ○ Aesthetic considerations

2. Learning from existing products and practice	• 2.1 Why it is important to analyse and evaluate products as part of the design and manufacturing process. • 2.3 Recognise how past and present product designers, technologies and design thinking have influenced the style and function of products.
3. Implications of wider issues	• 3.1 The factors that need to be considered whilst investigating design possibilities. • 3.2 The factors that need to be considered when developing designs for manufacture.

5. Material and component considerations	• 5.1 The factors that influence the selection of materials that are used in products:
	  ○ Functional performance
	  ○ Aesthetics
	  ○ Cost and availability
	  ○ Properties & characteristics
	  ○ Environmental consideration
	  ○ Social, cultural and ethical factors

6. Technical understanding	• 6.1 Considering the structural integrity of a design solution:
	  ○ Triangulation, reinforcing
	• 6.2 How products are designed to function effectively within their surroundings:
	  ○ Finishes to enhance appearance
	  ○ Finishes to prevent corrosion or decay

7. Manufacturing processes and techniques	• 7.4 How manufacturing is organised and managed for different scales of production. • 7.5 How the quality of products is controlled through manufacture.
8. Viability of design solutions	• 8.1 How designers assess whether a design solution meets its stakeholder requirements.

General advice: As well as the above, students and teachers should also consider how to focus their revision of other parts of the specification which may be tested in other lower mark questions.

Design & Technology A Level
Exam board: OCR
Examination Paper 2: Problem Solving in Product Design (H406/02)

This list below shows the topics that will be mainly, although **not** exclusively, tested through the higher mark questions:

3 Implications of wider issues	• 3.2 Awareness of the responsibilities and principles of designing for manufacture (DFM). • 3.3 The factors that need to be considered when manufacturing products.
4. Design thinking and communication	• 4.1 How product designers use annotated 2D and 3D sketching and digital tools to graphically communicate ideas.
5. Material and component considerations	• 5.1 The factors that influence the selection of materials that are used in products. • 5.2 The materials that should be selected when designing and manufacturing given products. • 5.3 Why it is important to consider the properties/characteristics of materials when designing and manufacturing products.

6. Technical understanding	• 6.2 How products are designed to function effectively within their surroundings:
	  ○ Finishes to enhance appearance
	  ○ Finishes to prevent corrosion or decay

7. Manufacturing processes and techniques	• 7.2 How materials and processes are used to make final prototypes. • 7.3 How materials and processes are used to make commercial products. • 7.4a. How and why different production methods are used when manufacturing products dependent on market demand.
8. Viability of design solutions	• 8.2 The methods and importance of undertaken physical testing on a product to ensure it meets the criteria it is meant to fulfil.

General advice: As well as the above, students and teachers should also consider how to focus their revision of other parts of the specification which may be tested in other lower mark questions.