Year 12 Curriculum Map 2023/2024

Click a subject Title to view the detailed Curriculum information for that subject.

Art	English Literature	Maths	Sociology
Biology	Financial Studies	Media	Sport
Business Studies	Forensic Science	Photography	Travel and Tourism
Chemistry	Geography	Psychology	Further Maths
Computer Science	Health and Social Care	Physics	
Criminology	History	Product Design	

Art

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	https://www.eduqas.co.uk/media/a3ndenvr/eduqas-a-level-art-and-design-spec-from-2015-e-090119.pdf Foundation studies September – February Created in response to the Eduqas Art and Design specification, this 6-month series of workshops allows students to produce practical and critical/contextual work in many areas of study including, drawing, painting, mixed-media, sculpture, ceramics, installation, printmaking, moving image (video, film, animation) and photography under the theme of 'being human'.	'Being Human' Exhibition The human figure from life-Life drawing methods What can artists learn from life drawing? Students explore the use of drawing and painting for different purposes, using a variety of methods, media, processes and techniques on a variety of scales. Wire sculptures Independent study project: Research and investigate human	The human figure from life- Life drawing methods Why are proportions important in art? Sighting / Measuring. Identifying Basic Shapes and Positive and Negative Space Perspective/angles/vie wpoints Gestural drawing techniques How can we master the formal elements of art using a range of challenging media, processes and techniques? Wire sculptures Independent study project: Build upon	Life drawing workshop baseline assessment task Learners must demonstrate their ability to: AO1 Develop ideas through sustained and focused investigations informed by contextual and other sources, demonstrating analytical and critical understanding. AO2 Explore and select appropriate resources, media, materials, techniques and processes, reviewing and refining ideas as work develops. AO3 Record ideas, observations and insights relevant to intentions,	6th form induction lesson- Professional life drawing workshop https://lifedrawing.academy/life -drawing-masters/michelangel o-buonarroti https://www.thedaring.co/2022/ 02/human-body-figure-drawing -multimedia-artist-fred-hatt/ Anthony Gormley- https://www.youtube.com/watc h?v=Q_L77CB9Fmc

These workshops make students aware of the importance of process as well as product. At the conclusion of the workshops, students have compiled a portfolio which demonstrates their knowledge and understanding of: how ideas, feelings and meanings can be conveyed and interpreted in images and artefacts in the chosen area(s) of study within fine art; historical and contemporary developments and different styles and genres; how images and artefacts relate to social. environmental, cultural and/or ethical contexts, and to the time and place in which they were created; continuity and change in different styles, genres and traditions relevant to fine art; a working vocabulary and specialist terminology that is relevant to their chosen area(s) of fine art.

form wire sculptures as inspiration

Painting

Abstracting the human-Abstract expressionism

They develop their understanding of both traditional, modern and contemporary drawing styles and art movements.

Jenny Saville- Artist response

Independent study project:

Learning renaissance approaches to portraiture and Ancient modes of representations of womanhood or fertility

Students' responses to these examples are shown through practical and critical

- analytical skills when taking inspiration from contextual sources.
- Development of ideas based on recording from primary sources
- Present and respond a final 3D outcome

Painting

Abstracting the human-Abstract expressionism

- Mastering painting styles and techniques (oil painting and gouache)
- How to work to larger scales and on more challenging surfaces

Jenny Saville- Artist response

 Independent study project: How to handle paint using expressive techniques of Fauvist and Abstract reflecting critically on work and progress.

AO4 Present a personal and meaningful response that realises intentions and, where appropriate, makes connections between visual and other elements.

https://www.metmuseum.org/to ah/hd/abex/hd abex.htm

Ancient modes of representations of womanhood or fertility; Renaissance approaches to portraiture and paint handling; and the expressive techniques of Fauvist and Abstract Expressionist painters.

activities that demonstrate their understanding of different styles, genres and traditions.

Printmaking

Students will expand on the knowledge learned in KS4, and learn a more niche, traditional printing making drypoint technique etching

What is mass production?

Why are **traditional printmaking techniques** still of value today? What can we learn from this?

Experimenting with printmaking techniques

 Independent study project: Research and experiment with different printmaking techniques

Expressionist painters.

 Using viewpoints and composition techniques to convey a message/idea

Printmaking

How do you create successful etchings in the style of Lucien Freud?

- Light and shade-Studio lighting and camera basics for portraiture
- Mark making techniques and building up tone and value with an etching needle
- How to load an etching plate with ink
- Using the **print press** to transfer accurately

Experimenting with printmaking techniques

project: Research and experiment with different printmaking techniques

https://www.youtube.com/watc h?v=MgXNp8ToVHk

https://www.theguardian.com/a rtanddesign/gallery/2016/dec/3 0/metal-and-skin-the-power-oflucien-freuds-etchings-in-pictur es

		Exhibition Independent study project:Why do artists exhibit? How can you make a career and profit as an artist?	 Exhibition Independent study project: How to curate an exhibition Developing social media platforms PR tools Creating professional prints to sell 	Students prepare, curate and present all of their workshop work in an end of term exhibition. This will be marked using the assessment objectives and predicted grade given (data drop 2 January)	Entrepreneurial skills
Spring	Jan-Feb	Ceramics What is installation art? The journey of clay The firing process in the kiln How to load the kiln Moving image Independent study project: How can you document your making process using a	Ceramics Techniques in sculpting the human form accurately from observation? How can we create form with clay? Working to a large scale with 3D materials Advanced glazing techniques Moving image stop motion Independent study	Data drop January	https://www.designboom.com/ art/sarah-sitkin-interview-sculpt ure-bodysuits-04-23-2018/ https://www.atassifoundation.c om/features/of-human-clay
		moving image? Why is moving image an important tool in storytelling and reaching out to a wider	project: Creating clips and basic editing skills		

Component 1 60%: February (Year 12)-July (component 1 will conclude in January (Year 13) Students conduct a personal investigation into an idea, issue, concept or theme, supported by written material. The focus of the investigation is identified independently by the student and leads to a finished outcome or a series of related finished outcomes. The investigation has to be a coherent, in-depth study that demonstrates the student's ability to construct and develop a sustained line of reasoning from the initial starting point to the final realisation. Students need to display their ability to research and develop ideas and relate their work in meaningful ways to relevant critical/contextual materials. The investigation must be	audience? What is a personal investigation? What is the personal study? How do the 2 link together?		
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written material must confirm understanding of creative		
decisions, by clarifying the		
focus of the investigation,		
demonstrating critical		
understanding of contextual		
and other sources,		
substantiating decisions		
leading to the development and		
refinement of ideas, recording		
ideas, observations and		
insights relevant to intentions		
by reflecting critically on		
practical work and making		
meaningful connections		
between visual, written and		
other elements. The written		
material must: be a coherent		
and logically structured		
extended response of between		
1000 and 3000 words of		
continuous prose; include		
specialist vocabulary		
appropriate to the subject		
matter; include a bibliography		
that identifies contextual		
references from sources such		
as: books, journals, websites,		
through studies of others' work		
made during a residency, or on		
1		

	a site, museum or gallery visit; be legible with accurate use of spelling, punctuation and grammar so that meaning is clear. There is no restriction on the scale and nature of practical work produced. Students should carefully select, organise and present their work for their Personal investigation which is then assessed as a whole.			
Summer	Component 1 60%: Personal investigation & Personal study		Data drop 3- Mock exam July	May/June- The school of creative arts degree show trip. University of Hertfordshire

Biology

<u>Term</u>	Topic title(s) and overview	Knowledge	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Chapter 2 - Basic components of living systems Chapter 3 - Biological molecules Chapter 4 - Enzymes Chapter 5 - Plasma membranes Chapter 6 - Cell divisions	 Microscopy Magnification and calibration Eukaryotic and prokaryotic cell structures Biological elements Carbohydrates, Lipids & proteins Nucleic acids DNA replication and the genetic code Protein synthesis ATP Enzyme action Factors affecting enzymes Inhibitors, coenzymes, and prosthetic groups. Structure and function of membranes Diffusion, Osmosis & Active transport. Cell cycle Mitosis & Meiosis 	 Forming a hypothesis Selecting suitable equipment Considering accuracy precision Identifying dependant and independent variables Identifying variables which need to be controlled Confidence using apparatus and techniques correctly Understanding SI units and prefixes Results table design Representing data in the most suitable way Understanding results and using this to reach valic conclusions. Using mathematical skills to process results 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills.	

		Specialised cells and stem cells	 Using scientific figures correctly Plotting and interpreting graphs Evaluate results to draw sound conclusions Understand and explain any limitations in the method Understand accuracy of measurement and margins of error. 		
Spring	Chapter 7 - Exchange surfaces and breathing Chapter 8 - Transport in animals Chapter 9 - Transport in plants Chapter 10 - Classification and evolution Chapter 11 - Biodiversity	 Exchange surfaces Mammalian gas exchange Ventilation and gas exchange in other organisms. Transport in multicellular animals. Blood vessels Blood, tissue fluid and lymph The heart. Dicotyledonous transport systems Multicellular plant transport Transpiration & translocation. Classification, phylogeny 	 Forming a hypothesis Selecting suitable equipment Considering accuracy precision Identifying dependant and independent variables Identifying variables which need to be controlled Confidence using apparatus and techniques correctly Understanding SI units and prefixes Results table design Representing data in the most suitable way 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills.	

		 Evidence for evolution. Types of variation Population characteristics. Biodiversity Sampling techniques Calculating biodiversity Factors affecting and reasons for maintaining biodiversity. 	 Understanding results and using this to reach valic conclusions. Using mathematical skills to process results Using scientific figures correctly Plotting and interpreting graphs Evaluate results to draw sound conclusions Understand and explain any limitations in the method Understand accuracy of measurement and margins of error. 		
Summer	Chapter 12 - Communicable diseases PAG 12	 Animal and plant pathogens Animal and plant diseases Transmission of communicable diseases. Plant defences Non-specific and specific immunity. Preventing and treating disease. 	 Forming a hypothesis Selecting suitable equipment Considering accuracy precision Identifying dependant and independent variables Identifying variables which need to be controlled Confidence using apparatus and techniques correctly 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills. Summative assessment of Module 1, 2 and 3 in year 12 mock exams.	

	 Understanding SI units and prefixes Results table design Representing data in the most suitable way Understanding results and using this to reach valic conclusions. Using mathematical skills to process results Using scientific figures correctly Plotting and interpreting graphs Evaluate results to draw sound conclusions Understand and explain any limitations in the method Understand accuracy of measurement and margins of error.
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Business Studies

<u>Term</u>	Topic title(s) and overview Teacher A/Teacher B	Knowledge	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	 Understanding the nature and purpose of business Understanding different business forms Understanding that businesses operate within an external environment, Understanding management, leadership and decision making Understanding management decision making Understanding the role and importance of stakeholders, 	Students must have knowledge of the following key terminology: Profit Costs Aims Objectives Goods Services Social enterprise Aims Objectives Mission Statement Opportunity cost Revenue Fixed costs Variable costs Variable costs Sole trader Partnership Private Limited company Public Limited Company Social enterprise Unlimited and limited Liability Ordinary share capital Market capitalisation Dividends Competition Market conditions Incomes	 To understand why businesses exist. To understand the relationship between mission and objectives. To understand why businesses set objectives. To understand the measurement and importance of profit. To understand reasons for choosing different forms of business and for changing business forms. To understand the role of shareholders and why they invest. To learn about influences on share price and the significance of share price changes. The effects of ownership on mission and objectives. To understand how the external environment can affect costs and demand. The difference between leadership and management, application of the Tannenbaum and Schmidt 	Students will be assessed formatively and summatively throughout the term. Formative assessment will include: • Low stake retrieval quizzes • Multiple choice questions • Questioning during lesson • WOWO board responses • Short answer responses and definition tests. • Seneca learning Summative assessment will include: • Case study responses • Data response • Synoptic assessment • Mock exams	Protected characteristics including: Age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation. Are covered throughout using the following methods: Case studies to include business leaders from different backgrounds Discussions on business decisions and how they affect minority groups and those with protected characteristics. SMSC Spiritual - reflecting on and having a clear understanding of how a business actions and purpose can be inclusive and how that is promoted, students use their imagination to

	 Understanding management, leadership and decision making Understanding management decision making. Understanding the role and importance of stakeholders. 	 Interest rates Demographic factors Environmental issues Fair trade. Autocratic Paternalistic Democratic Laissez-faire. decision trees Decision making to include an understanding of: risks rewards uncertainty opportunity costs the use and value of decision trees in decision making. Influences on decision making to include: mission objectives ethics the external environment including competition resource constraints. Stakeholder mapping: stakeholder power and interest. 	continuum To understand the distinction between management and leadership. To be aware of types of management and leadership styles and influences on these. To understand the effectiveness of different styles of management and leadership. To learn about the value of decision making based on data (scientific decision making) and on intuition. To understand the influences on decision making. To learn about considering stakeholders' needs when making decisions. To learn about stakeholder needs and the possible overlap and conflict of these needs. To learn about how to manage the relationship		apply business theory to creative business ideas. Moral - students will have a clear understanding on business ethics and the consequences of business decisions. Students will challenge the idea of autocratic leadership, capitalism and exploitation through a range of different case studies and scenarios. As well as keeping up to date with world business news. Social - students will be encouraged to use a range of social skills in different contexts, such as problem solving in groups, debating with each other whilst having acceptance and engagement of the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs Cultural - In addition to the above students will develop their culture capital and social mobility through trips and experiences such as talks from Business leaders. Overseas trips will be available during the course as well as UK based visits.
Spring	 Setting marketing objectives. 	Marketing objectives include: sales volume and sales value market size market and sales growth market share	To understand the value of setting marketing objectives.	Students will be assessed formatively and summatively throughout the term.	Protected characteristics including: Age, disability, gender reassignment, marriage and civil partnership,

- Understanding markets and customers.
- Making marketing decisions, segmentation, targeting, positioning.
- Making marketing decisions; using the marketing mix
- Setting operational objectives.
- Analysing operational performance.
- Making operational decisions to improve performance: increasing efficiency and productivity.
- Making operational decisions to improve performance: improving quality.
- Making operational decisions to improve performance: managing inventory and supply chains.

- brand loyalty.
- Marketing research should include:
 - o qualitative and quantitative data.
- You should be able to calculate market and sales growth, market share and size.
- The value of sampling should include:
 - o random
 - o stratified
 - o quota.
- Interpretation of marketing data should include:
 - o positive and negative correlation and an understanding of the strength of the relationship
 - o understanding the concept of confidence intervals
 - o understanding extrapolation.
- You should be able to interpret price and income elasticity of demand data and be able to analyse the impact of changes in price and income on revenue (you do not need to be able to calculate these)

Segmentation methods include:

- demographic
- geographic
- income
- behavioural segmentation.

Targeting may include niche and mass marketing.

Positioning should include market mapping.

 The marketing mix should be considered for goods and services, both industrial and consumer.

- To learn about the value of primary and secondary marketing research.
- To learn about the value of sampling.
- To understand the interpretation of marketing data.
- To understand the interpretation of price and income elasticity of demand data.
- To understand the value of the concepts of price and income elasticity of demand to marketing decision makers.
- To learn about the use of data in marketing decision making and planning.
- To learn about the process and value of segmentation, targeting and positioning.
- To learn about the influences on choosing a target market and positioning.
- To understand the value of setting operational objectives.
- To interpret, calculate and use operations data in operational decision making and planning.
- To understand the importance of capacity.
- To understand the importance of efficiency and labour productivity.
- To understand the benefits and difficulties of lean production.

Formative assessment will include:

- Low stake retrieval quizzes
- Multiple choice questions
- Questioning during lesson
- WOWO board responses
- Short answer responses and definition tests.
- Seneca learning

Summative assessment will include:

- Case study responses
- Data response
- Synoptic assessment
- Mock exams

pregnancy and maternity, race, religion or belief, sex, and sexual orientation. Are covered throughout using the following methods:

Case studies to include business leaders from different backgrounds

Discussions on business decisions and how they affect minority groups and those with protected characteristics.

SMSC

Spiritual - reflecting on and having a clear understanding of how a business actions and purpose can be inclusive and how that is promoted, students use their imagination to apply business theory to creative business ideas.

Moral - students will have a clear understanding on business ethics and the consequences of business decisions. Students will challenge the idea of autocratic leadership, capitalism and exploitation through a range of different case studies and scenarios. As well as keeping up to date with world business news.

 Product decisions should include: the value of product portfolio analysis and the Boston Matrix the value of the product life cycle model including extension strategies influences on and the value of new product development. Pricing decisions should include penetration and price skimming. Promotional decisions should include: the value of branding oscial media oviral marketing. Distribution decisions should include multi-channel distribution. Influences on an integrated marketing mix include: the position in the product life cycle the Boston Matrix the type of product marketing objectives the target market competition Positioning Operational objectives include: costs quality speed of response and flexibility environmental objectives added value. You should be able to calculate: labour productivity unit costs (average costs) capacity 	 To learn about how to choose the optimal mix of resources. To understand how to use technology to improve operational efficiency. To learn about methods of improving quality. To learn about the benefits and difficulties of improving quality. To learn about the consequences of poor quality. To understand how to manage supply to match demand and the value of doing so. To learn about the influences on the amount of inventory held. To learn about influences on the choice of suppliers. To learn about how to manage the supply chain effectively and efficiently and the value of outsourcing. 	Social - students will be encouraged to use a range of social skills in different contexts, such as problem solving in groups, debating with each other whilst having acceptance and engagement of the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs Cultural - In addition to the above students will develop their culture capital and social mobility through trips and experiences such as talks from Business leaders. Overseas trips will be available during the course as well as UK based visits.

		 capacity utilisation. Importance of capacity should include how to utilise capacity efficiently. Importance of efficiency and labour should include: how to increase efficiency and labour productivity difficulties increasing efficiency and labour productivity. Lean production should include 'Just-In-Time' operations vs 'Just in Case'. The mix of resources should include an understanding of labour and capital intensive processes. Methods of improving quality should include quality assurance vs quality control. Ways of matching supply to demand include: outsourcing use of temporary and part time employees producing to order. Inventory control should include: interpreting inventory control charts lead time re-order levels buffer level of inventory re-order quantities. 			
Summer	Setting financial objectives.	Financial objectives to include: o the concept of a return on investment o revenue, costs and profit objectives	To understand the value of setting financial objectives.	Students will be assessed formatively and summatively throughout the term.	Protected characteristics including: Age, disability, gender reassignment, marriage and civil partnership,

- Analysing financial performance.
- Making financial decisions: sources of finance.
- Making financial decisions: sources of finance.
- Setting human resource objectives
- Analysing human resources performance
- Making human resource decisions: improving organisational design and managing the human resource flow.
- Making human resource decisions: improving motivation and engagement.
- Making human resource decisions: improving employer-employee relations.

- o cash flow objectives.
- Analysing budgets should include variance analysis and adverse and favourable variances
- o Break-even analysis should include:
- o Break-even output
- o margin of safety
- o contribution per unit
- o total contribution.
- Analysing profitability margins should include the following ratio analysis:
 - o gross profit
 - o profit from operations
 - o profit for the year.
- Analysing timings of cash flow should include an understanding of payables and receivables.
- Sources of finance should include:
 - o debt factoring
 - o Overdrafts
 - o retained profits
 - o share capital
 - o Loans
 - o crowd funding.
 - o venture capital
 - You should be able to assess ways of improving cash flow.
 - You should be able to assess ways of improving profits and profitability.
- Human resource objectives include:
 - employee engagement
 - talent development

- To understand the distinction between cash flow and profit
- To understand the distinction between gross profit, operating profit and profit for the year.
- To learn how to construct and analyse budgets and cash flow forecasts.
- To understand the value of budgeting.
- To learn how to construct and interpret break-even charts.
- To learn how to calculate and illustrate on a break-even chart the effects of changes in price, output and cost.
- To calculate the value of break-even analysis.
- To learn how to analyse profitability.
- To learn how to analyse timings of cash inflows and outflows.
- To understand the use of data for financial decision making and planning.
- To learn about internal and external sources of finance
- To understand the advantages and disadvantages of

Formative assessment will include:

- Low stake retrieval quizzes
- Multiple choice questions
- Questioning during lesson
- WOWO board responses
- Short answer responses and definition tests.
- Seneca learning

Summative assessment will include:

- Case study responses
- Data response
- Synoptic assessment
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pregnancy and maternity, race, religion or belief, sex, and sexual orientation. Are covered throughout using the following methods:

Case studies to include business leaders from different backgrounds

Discussions on business decisions and how they affect minority groups and those with protected characteristics.

SMSC

Spiritual - reflecting on and having a clear understanding of how a business actions and purpose can be inclusive and how that is promoted, students use their imagination to apply business theory to creative business ideas.

Moral - students will have a clear understanding on business ethics and the consequences of business decisions. Students will challenge the idea of autocratic leadership, capitalism and exploitation through a range of different case studies and scenarios. As well as keeping up to date with world business news.

 training diversity alignment of employee and employer values number, skills and location of employees. You should be able to calculate and interpret: labour turnover labour productivity employee costs as percentage of turnover labour cost per unit Organisational structures to include: functional, product based, regional and matrix structure. Decisions relating to organisational design include: o authority span hierarchy delegation centralisation and decentralisation. Human resource flow to include: o human resource plan o recruitment o training Redeployment o Redundancy. Theories of motivation should include Taylor, Maslow and Herzberg. Financial methods of motivation should include: piece rate commission 	different sources of finance for short- and long-term uses. • To learn about methods of improving cash flow. • To learn about methods of improving profits and profitability. • To learn about difficulties improving cash flow and profit. • To understand the value of setting human resource objectives. • To learn about methods of achieving human resource objectives. • To calculate and interpret human resource data. • To understand the use of data for human resource decision making and planning. • To learn about models of organisational structure. • To learn about influences on organisational design. • To learn about the value of changing organisational design. • To understand how managing the human resource flow helps meet human resource flow helps meet human resource objectives. • To learn about the benefits of motivated and engaged employees. • To understand how to improve employee engagement and motivation.	Social - stud to use a rang different con solving in gr each other w and engager British values of law, indivic respect and different faith Cultural - In students will capital and s trips and exp from Busines will be availa well as UK ba
l .	employee engagement and	

Social - students will be encouraged to use a range of social skills in different contexts, such as problem solving in groups, debating with each other whilst having acceptance and engagement of the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs

Cultural - In addition to the above students will develop their culture capital and social mobility through trips and experiences such as talks from Business leaders. Overseas trips will be available during the course as well as UK based visits.

	performance-related pay. Non-financial methods of motivation should include: empowerment team working flexible working job enrichment job rotation. Employee representation methods to include trade unions and works councils.	non-financial methods of motivating employees To learn about influences on the extent and methods of employee involvement in decision making. To learn about how to manage and improve employer-employee communications and relations. To understand the value of good employer-employee relations.		
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Chemistry

Autumn Chapter 2 - Atoms, ions and compounds Chapter 3 - Amount of substance Chapter 4 - Acids and redox Chapter 5 - Electrons and bonding Chapter 6 - Shapes of molecular and intermolecular forces. Chapter 7 Periodicity Chapter 7 Periodicity Chapter 8 - Atomic structure and isotopes Relative mass Formulae and equations Amount of substance and the mole Determination of formulae Moles and volumes Reacting quantities Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills. Selecting appropriate quantities of materials and substances and scale of working Solving physical problems in a practical context Applying physics concepts to practical problems Redox Electron structure Selecting appropriate quantities of materials and substances and scale of working Solving physical context Applying physics concepts to practical problems Identify hazards and safe procedures	<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Chapter 11 - Basic concepts of organic chemistry • Ionic bonding and structure • Covalent bonding • Shapes of molecules and ions • Electronegativity and polarity • Intermolecular forces • Hydrogen bonding • The periodic table • Using SI units • Recording qualitative observations accurately • Recording a range of qualitative measurements • Using SI units • Recording qualitative • Observations accurately • Using SI units • Recording qualitative • Observations	Autumn	compounds Chapter 3 - Amount of substance Chapter 4 - Acids and redox Chapter 5 - Electrons and bonding Chapter 6 - Shapes of molecules and intermolecular forces. Chapter 7 Periodicity Chapter 11 - Basic concepts of organic chemistry	isotopes Relative mass Formulae and equations Amount of substance and the mole Determination of formulae Moles and volumes Reacting quantities Acids, bases and neutralisation Acid-base titrations Redox Electron structure Ionic bonding and structure Covalent bonding Shapes of molecules and ions Electronegativity and polarity Intermolecular forces Hydrogen bonding	 equipment Selecting appropriate techniques Selecting appropriate quantities of materials and substances and scale of working Solving physical problems in a practical context Applying physics concepts to practical problems Identify hazards and safe procedures Using SI units Recording qualitative observations accurately Recording a range of qualitative measurements Using the appropriate precision for apparatus Analysing quantitative 	levelled response questions for extended writing, timed MCQ's, analytical questions	

		 Ionisation energies Periodic trends in bonding and structure Organic chemistry Nomenclature of organic compounds Representing the formulae of organic compounds Isomerism Reaction mechanisms Properties of Alkanes Chemical reactions of the alkanes. 	 Analysing quantitative experimental data Selecting and labelling axes with appropriate scales, quantities and units. Drawing tangents and measuring gradients. Reaching conclusions from qualitative observations Identifying uncertainties and calculating percentage errors Identifying procedural and measurement errors Refining procedural and measurements to suggest improvements 		
Spring	Chapter 8 - Reactivity trends Chapter 9 - Enthalpy Chapter 13 - Alkenes Chapter 14 - Alcohols	 Group 2 The halogens Qualitative analysis Enthalpy changes Measuring enthalpy changes Bond enthalpies 	 Selectinge apparatus and equipment Selecting appropriate techniques Selecting appropriate quantities of materials and substances and scale of 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills.	
	Chapter 15 - Haloalkanes Chapter 16 - Organic synthesis	 Hess' Law and enthalpy cycles Properties of alkenes Stereoisomerism Reactions of alkenes 	 working Solving physical problems in a practical context Applying physics concepts to practical problems 		

Electrophilic addition in alkenes Polymerisation in alkenes Properties of alcohols Reactions of alcohols The chemistry of haloalkanes Organohalogen compounds and the environment Practical techniques in organic chemistry Synthetic routes	Identify hazards and safe procedures Using SI units Recording qualitative observations accurately Recording a range of qualitative measurements Using the appropriate precision for apparatus Analysing quantitative observations Analysing quantitative experimental data Selecting and labelling axes with appropriate scales, quantities and units. Drawing tangents and measuring gradients. Reaching conclusions from qualitative observations Identifying uncertainties and calculating percentage errors Identifying procedural and measurement errors Refining procedural and measurements to suggest improvements
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Summer	Chapter 10 - Reaction rates and equilibrium	Reaction ratesCatalysts	Selectinge apparatus and equipment	Assessment point to include;	
Summer	Chapter 17 - Spectroscopy	 Catalysts Boltzmann distribution Dynamic equilibrium and leChatelier's principle Equilibrium constant Mass spectroscopy Infrared spectroscopy 	 Selecting appropriate techniques Selecting appropriate quantities of materials and substances and scale of working Solving physical problems in a practical context Applying physics concepts to practical problems Identify hazards and safe procedures Using SI units Recording qualitative observations accurately Recording a range of qualitative measurements Using the appropriate precision for apparatus Analysing quantitative observations Analysing quantitative experimental data Selecting and labelling axes with appropriate scales, quantities and units. Drawing tangents and measuring gradients. 	levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills. Summative assessment of Module 1, 2, 3 & 4 to assess extended recall, application of knowledge and evaluative skills (AO1, AO2, AO3).	

	 Reaching conclusions from qualitative observations Identifying uncertainties and calculating percentage errors Identifying procedural and measurement errors Refining procedural and measurements to suggest improvements
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Computer Science

<u>Term</u>	Topic title(s) and overview	Knowledge	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)	
Autumn	Autumn Mr Kirkman	Fundamentals of data structure and representations Students explore what data is and how it is used without coding. They will look at specific concepts, operations and how data constructs to form simple programmes. Students will look at binary, its advantages and disadvantages and ensure they understand how to perform binary calculations.	Students will know What an array is and how it functions. They will understand how to read and write to and from text files. Students will work through a variety of binary calculations including, addition, subtraction, division and multiplication.	Students will be able to Build on these skills to create one and two dimensional arrays. They will use search functions to select data from a specific position in the list. They will be able to carry out and perform binary calculations.	Students will be assessed with a variety of exam style questions. Students will also be given opportunities to practise their coding skills in order to develop these ready for the non exam component.	Computing is a key skill in the world of IT today. This will build on the students' understanding of computing and some of the more basic concepts of programming.
Spring	Autumn	Services provided by IT	Students will know	Students will be able to	Students will be assessed with a variety of exam style	This topic will cover the main components of a

	Mr Gould	Students will learn about the hardware and software of computer systems. Students will be able to describe the main components of a computer and their uses. Students will also examine the relationships and classification of system components. They will explore the programming language and program translator.	The correct terminology to use when looking at computer systems. They will be able to explain the difference between high level and low level language. Students will know the different types of storage available and the principle operations of those storage devices.	Deconstruct the software and will be able to demonstrate machine code and assembly language. Students will be able to identify the components of a computer, describe the use of it and explain the software needed to ensure that it runs correctly.	questions. Students will be given components of computers to name and explain their use. They will need to explain how the component fits together with other components and what the purpose of working together is.	computer. Students can see how computers are built and how components fit together. Students look at the basis of computing, how they are used and how they fit together. This will help in a variety of areas throughout their lives as technology continues to grow and shape the world around us.
Summer	Spring Mr Kirkman	Logic gates and boolean Students will look at how to apply logic gate designs to boolean expressions. They will use truth tables to manipulate and simplify the logic gate.	Students will know What a logic gate is and the purpose of it. They will also need a basic understanding of truth tables and how they work.	Students will be able to Complete complex truth tables. They will understand the link between a logic gate and a truth table.	Students will be assessed with a variety of exam style questions. Students will also be given opportunities to practise their coding skills in order to develop these ready for the non exam component.	Computing is a key skill in the world of IT today. This will build on the students' understanding of computing and some of the more basic concepts of programming.

3	Spring	They will also continue to work on their programming skills. Networks and stored	Students will know	Students will be able to	Students will be assessed	Understanding connections
	Mr Gould	Students will look at the different types of network topologies and protocols used to transfer data. Students will also look at the different types of encryption and how to ensure data is safe. They will also look at the architecture of systems and what is needed to ensure networks are able to securely transfer data. Students will explore the process involved in the fetch-execute cycle.	The different types of topologies used in networking. They will be able to identify the topologies and how more than one type of topology can work with another. Students will need to understand the fetch-execute cycle and what this process does in order for programs to operate.	Students will also be able to identify the benefits and drawbacks of different types of connectivity. Identify the different areas of the fetch-execute cycle. Students will be able to explain the process using the correct terminology for each stage.	with a variety of exam style questions. Students will also be given opportunities to practise their coding skills in order to develop these ready for the non exam component.	and how to transfer data in a safe and secure manner will support students in later life to ensure they follow certain protocols.

Summer Mr Kirkman	Databases and big data Students will look to create an SQL database which links more than one database. Students will model, describe, explain and normalise relational databases. Students will look at large quantities of data and how this can be an issue. They will look at the implications surrounding holding such data.	What SQL databases are, they will understand the 'select' 'where' 'from' process involved. Big data has a lack of structure to it, they will understand what issues may arise from this.	Students will be able to Write code which will allow a SQL query to run and select the relevant data from the database. Students will understand the process of structuring a relational database in accordance with a series of so-called normal forms in order to reduce data redundancy and improve data integrity.	Students will examine case studies and answer exam style questions. They will also sit an end of year mock exams which will cover all the topics they have studied this academic year.	Databases are used across all systems in work environments. Companies all use databases to store records and information. Students will gain a good knowledge of how to create and store data so it can be access and used effectively.
Summer Mr Gould	Legal, ethical, moral impact of computers Students will investigate the potential problems with storing data on computers and the impact of data loss and breaches to GDPR.	Students will know What the law is for data protection and GDPR. They will also discover the different methods of cyber attacks and ways to prevent them.	Students will be able to Explain the eight principles of GDPR. They will understand what data protection is and how business will ensure data is safe from cyber attacks.	Students will examine case studies and answer exam style questions. They will also sit an end of year mock exams which will cover all the topics they have studied this academic year.	Cyber security is an ongoing issue in the wider world. Students will look at how businesses keep themselves safe and ensure that GDPR laws are not broken. Students will need to ensure their own data is protected and safe, this

	Students look at what cyber attacks are and the prevention methods.		topic will give them the foundations of how to ensure they are protected.
	Students will also prepare		
	their planning for the non		
	exam component. They will		
	begin to develop ideas they		
	will use for the project.		

Criminology

<u>Term</u>	Topic title(s) and overview	Knowledge	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn & spring	Unit 1: Understanding how crime reporting affects the public perception of criminality	AC 1.1 Different types of crime AC 1.2 Explain the reasons that certain crimes are unreported AC 1.3 Explain the consequences of unreported crime AC 1.4 Describe media representation of crime A C1.5 Explain the impact of media representations on the public perception of crime AC 1.6 Evaluate methods of collecting statistics about crime AC 2.1 Compare campaigns for change AC 2.2 Evaluate the effectiveness of media used in campaigns for change AC 21.3 Plan a campaign for change relating to crime	Analyse crimes and criminal behaviour Analyse how different aspects of the media report different crimes Understand and analyse how media reporting impacts public perception of crime and public reporting of it Understand and analyse how public perception of crime directly influences public policy Learn how to create campaigns for change, including materials to transport your message to your target audience.	This unit will be assessed via a teacher-marked controlled assessment February/March Prior to this, students will be formatively assessed through ongoing homeworks and further reading, whilst some summative assessments will be carried out at the end of each AC. The students will be provided with extra reading and encouraged to learn beyond the taught lessons and recommended reading.	Students will understand how media impacts society's perceptions of crime and criminality. This will directly link to their own use of social media and how their own perception of the world is affected by their consumption of it. Links to media, psychology and sociology

		AC 3.1 Plan a campaign for change relating to crime AC 3.2 Design materials for use in campaigning for change AC 3.3 Justify a campaign for change			
Spring & summer	Unit 2: Understanding social constructions of criminality	AC 1.1 Compare criminal behaviour and deviance AC 1.2 Explain the social construction of criminality AC 2.1 Describe biological theories of criminality AC 2.2 Describe individualistic theories of criminality AC 2.3 Describe sociological theories of criminality AC 3.1 Analyse situations of criminality AC 3.2 Evaluate the effectiveness of criminological theories to explain causes of criminality	Understand and analyse different theories of criminality and what causes people to commit criminal acts.	Students will be assessed on an ongoing basis as per Unit 1. This will include extra reading and an encouragement to learn beyond the taught lessons and recommended reading. Unit 2 will be summatively assessed via external exam in May of year 12.	Links to psychology and sociology

English Literature

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn Term 1: Paper 1 – Love through the Ages	In this term students will: Learn about the idea of a historicist perspective of love Learn about the different time periods of literary movements Be introduced to the Pre 1900 Anthology of Love Poetry Explore the plot, character, themes, structure, stagecraft and debates around love in their Shakespeare text (Taming of the Shrew) Explore the plot, character, themes, structure and debates around love in F.Scott Fitzgerald's The Great Gatsby	 Key knowledge: The plot, character, theme, structure and stagecraft of Shakespeare's 'Taming of the Shrew'. The social, historical, autobiographical, literary context of the Shakespeare play The plot, character, structure and themes of F.Scott Fitzgerald's 'The Great Gatsby'. The social, historical, literary, autobiographical context of F.Scott Fitzgerald. The themes, forms, language and structure of the Pre 1900 poetry 	Ability to debate concepts of love and their presentation in texts Ability to compare texts across time and themes Analysis of language	Students will be given a range of tasks to complete each week for additional study. These may include: Pre reading and preparation Wider reading to broaden their contextual knowledge and literary debate Wider watching of lectures to deepen their analysis and debate An essay to write, consolidating their knowledge from the lessons In addition, in this term students will complete:	There are a great many links to this unit. Notably: The Shakespeare question is very similar in style to the GCSE Shakespeare question with the use of an extract but with the added depth from demanding a debate. The poetry anthology will draw on the students GCSE skills of reading, comprehending, comparing and memorising aspects of 15 poems. The novel study of 'The Great Gatsby' will draw on skills learned across their entire

Students will explore the key
questions:

- What are the key debates about love?
- What are the key perspectives of love?
- What is Shakespeare saying about love in Taming of the Shrew?
- What are the poets' views of love?
- What is F.Scott Fitzgerald saying about love?

- The social, historical, autobiographical, literary contexts of the poets
- Analysis of character
- Analysis of structure
- Analysis of stagecraft
- Evaluation of writers' intention and success

- A formally marked essay on The Great Gatsby
- A formally marked essay on the Shakespeare text

school career studying at least one novel a year.

Cultural:

Students will learn the historical timeline of literature and the features of the different periods and literary movements.

Moral:

As the unit is focused on love, students will explore the many complexities of relationships from parental love to romantic love, considering the darker aspects of love such as jealousy; control; revenge; betrayal as well as companionship, partnership and equality.

Social:

As a natural part of studying love through the ages, students will deepen their knowledge of Marxism and Feminist movements and

					consider the role of the patriarchy and class systems in controlling people's most intimate relationships.
Spring Term 2: Paper 1 Love Through the Ages and Non Examined Assessme nt preparatio n	In this term, the focus will move to revision and redrafting skills as students: • Complete their first draft of their NEA coursework essay, comparing a theme of their choice across two texts (one of which will be 'Frankesntein'. • Prepare and revise for their mock Paper 1: Love Through the Ages Students will also deepen their knowledge of unseen poetry analysis by exploring unseen poems together to create comparisons. Students will explore the key questions: How do I identify the gaps in my knowledge?	 The debates about love across time The features and conventions of literature across the literary canon and timeline The conventions of courtship, love and marriage in different cultures and times The plot, characters, structure, stagecraft, themes and debates of the Shakespeare text (Taming of the Shrew) The plot, characters, structure, themes and debates of 'The Great Gatsby' The form, structure, language, themes and debates of the Pre 1900 Love Poetry Anthology 	 To be able to plan, structure and create a perceptive response to a debate To be able to manage time To be able to set milestones and hold yourself to account To be able to research, read and evaluate critical responses to texts To be able to draft, edit, redraft and polish a piece of work over time 	Students will be given a range of tasks to complete each week for additional study. These may include: Pre reading and preparation Wider reading to broaden their contextual knowledge and literary debate Wider watching of lectures to deepen their analysis and debate An essay to write, consolidating their knowledge from the lessons	The links to this term are as above in the prior two terms as this term is a consolidation of the learning in Term 1 and 2

ha kr W lo W in H- ju V cc V th H- in ex	low can I revise to ensure I ave a full, broad, secure nowledge of the texts? What are the key debates about ove? What makes a powerful atroduction? Ilow do I select material adiciously in my essays? What makes a compelling onclusion? What areas of Literature and nemes intrigue me the most? Ilow do I best manage my time in coursework creation and in examinations? What are the most effective nethods of revision?	For unseen poetry, we will consider: • What are the key poetic movements across the ages • How does time affect the context and possible content of a text • How to compare and connect literary texts on a theme across time		In addition, in this term students will complete: A 3 hour mock paper on Love Through the Ages covering: Section A: Shakespeare text Section B: Comparison of unseen poetry Section C: Comparison of an aspect of love in The Great Gatsby and the Pre 1900 Love Poetry A draft version of their 2,000 word non-examined assessment comparative essay on texts of their choice	
Summer to ar	n this term, students will begin o focus on the Paper 2 exam, nd will study two further texts The Handmaid's Tale' and 'A	Key knowledge: • The plot, character, theme, and structure of the modern texts	Key skills: • Ability to debate concepts of love and	Students will be given a range of tasks to complete each	The links to this term are as above in the prior two terms as

Term 3: Texts in shared contexts - modern times	Streetcar Named Desire'). They will:	 The social, historical, autobiographical, literary context of 'The Handmaid's Tale' The social, historical, autobiographical, literary context of 'A Streetcar Named Desire' Analysis of character Analysis of structure Evaluation of writers' intention and success 	their presentation in texts • Ability to compare texts across time and themes • Analysis of language	week for additional study. These may include: Pre reading and preparation Wider reading to broaden their contextual knowledge and literary debate Wider watching of lectures to deepen their analysis and debate An essay to write, consolidating their knowledge from the lessons They will also sit their formal mock exams as part of the end	this term is a consolidation of the learning in Term 1 and 2
				of Year 12 A-Level mock exam series.	

Financial Studies

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	 The value and purposes of money. The concept of the personal life cycle and the impact of external influences. The features of different types of financial services products. The role of key stakeholders in financial services provision. The characteristics of financial products for managing money. How to manage finance in the short term and the impact of poor decision making and unforeseen circumstances. The impact of legislation and regulations on earnings and the key features of income tax and National Insurance. 	 History of money, barter, LETS Eight features of money Functions that money must perform purchasing power Bank accounts How money can be used Advantages and disadvantages of cash Electronic one off and regular payments Advantages and disadvantages of cheques Bankers drafts Life cycle definitions Paying for needs, wants and aspirations Likely life events in the life cycle. External influences on the life cycle The potential effects of external influences Inflation and savings Taxation and savings 	 Define the purposes of money. Outline the key features of money. Critically compare different methods of transferring money. Distinguish between the key stages of the personal life cycle. Distinguish between the external influences on key stages of the personal life cycle. Analyse the effect of external influences on key stages of the personal life cycle. Differentiate between financial services products for savings. Identify the key features of basic savings accounts. Outline the key features of the financial services products for borrowing. 	Formative assessment will include: Low stake retrieval quizzes Multiple choice questions Questioning during lesson WOWO board responses Short answer responses and definition tests. Seneca learning Peardeck Summative assessment will include: Case study responses Data response Multiple choice questions	Protected characteristics including: Age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation. Are covered throughout using the following methods: Case studies to include business leaders from different backgrounds Discussions on business decisions and how they affect minority groups and those with protected characteristics. SMSC Spiritual - reflecting on and having a clear understanding of how a business actions and purpose can be inclusive and how that is promoted, students use their imagination to

•	An individual's financial needs through the various life stages.	

- Safety of money saved
- Choice of savings accounts
- How savings accounts operate
- Use and costs of overdrafts
- Use and costs of credit cards
- Use and costs of personal loans
- The costs of borrowing
- How banks operate
- How building societies operate
- How credit unions operate
- How NS&I operates
- How the Post Office operates
- Communication channels used by providers
- Background to consumer protection
- Role of the regulators
- Financial Ombudsman Service
- Financial Services
 Compensation Scheme
- Competition and Markets
 Authority
- Voluntary codes of conduct
- Choosing a current account
- Different types of current account

- Identify the key features of costs of borrowing.
- Differentiate between different types of financial services provider.
- Critically compare the communication methods used by financial services providers.
- Explain the role of financial services regulatory bodies.
- Identify the key features of different types of bank accounts.
- Distinguish between different types of card payment.
- Interpret a cash flow forecast for short-term financing.
- Provide solutions for dealing with unforeseen events that impact on current finances.
- Explain the potential consequences for an individual of living beyond their means.
- Interpret legislative, regulatory and organisational requirements and procedures relevant to earnings.

apply business theory to creative business ideas.

Moral - students will have a clear understanding on business ethics and the consequences of business decisions. Students will challenge the idea of autocratic leadership, capitalism and exploitation through a range of different case studies and scenarios. As well as keeping up to date with world business news.

Social - students will be encouraged to use a range of social skills in different contexts, such as problem solving in groups, debating with each other whilst having acceptance and engagement of the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs

Cultural - In addition to the above students will develop their culture capital and social mobility through trips and experiences such as talks from Business leaders. Overseas trips will be available during the course as well as UK based visits.

	 Changing attitudes to risk in the life cycle. Brief introduction to credit history Which borrowing products suit different needs Choosing the right provider Cost of living in UK today 		
Spring			
Summer			

Forensic Science

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Unit 1: Principles and Applications of Science I	A Periodicity and properties of elements A1 Structure and bonding in applications in science A2 Production and uses of substances in relation to properties B Structure and functions of cells and tissues B1 Cell structure and function B2 Cell specialisation B3 Tissue structure and function C Waves in communication C1 Working with waves C2 Waves in communication C3 Use of electromagnetic waves in communication		Written examination in January 2024 set and marked by Pearson. 1 hours. (Sat in three timed sessions of 40 mins for each of Biology, Chemistry and Physics) 1 hours. Assessment outcomes A01 Demonstrate knowledge of scientific facts, terms, definitions and scientific formulae A02 Demonstrate understanding of scientific concepts, procedures,	

			processes and techniques and their application. AO3 Analyse, interpret and evaluate scientific information to make judgements and reach conclusions. AO4 Make connections, use and integrate different scientific concepts, procedures, processes or techniques	
Spring	Unit 2: Practical Scientific Procedures and Techniques	A Undertake titration and colorimetry to determine the concentration of solutions A1 Laboratory equipment and its calibration A2 Preparation and standardisation of solutions using titration A3 Colorimetry B Undertake calorimetry to study cooling curves B1 Thermometers B2 Cooling curves	Students will be assessed in a variety of ways for this unit: - Written reports for each procedure that include: - Methods used - Results collected - Processing of data - Analysis of data - Evaluation of Method	

		C Undertake chromatographic techniques to identify components in mixtures C1 Chromatographic techniques C2 Application of chromatography C3 Interpretation of a chromatogram D Review personal development of scientific skills for laboratory work. D1 Personal responsibility D2 Interpersonal skills D3 Professional practice	- Conclusions made - Observations by the teacher, including safety Written report that focuses on the evaluation of their own performance and skill development throughout the unit.	
Summer	Unit 4: Forensic Investigation Procedures in Practice			

Geography

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	<u>Assessment</u>	Wider learning (Equality and diversity, SMSC, cultural capital)
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Autumn	Water and Carbon Cycles (Paper 1: Section A) Coastal Systems and Landscapes (Paper 1: Section B)	Water and carbon as natural systems: Systems in physical geography: systems concepts and their application to the water and carbon cycles. The water cycle	Case study of a tropical rainforest setting to illustrate and analyse key themes in water and carbon cycles and their relationship to environmental change and human activity. Case study of a river	Section A: Water and carbon cycles Section B: Coastal systems and landscapes •Written exam: 2 hours 30 minutes	Global Issues and challenges Current Affairs Global Development
		Global distribution and size of major stores of water — lithosphere, hydrosphere, cryosphere and atmosphere. 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 space, including flows and transfers at plant, sere and continental scales. Photosynthesis, respiration, decomposition, combustion,	Case study of a river catchment(s) at a local scale to illustrate and analyse the key themes above, engage with field data and consider the impact of precipitation upon drainage basin stores and transfers and implications for sustainable water supply and/or flooding. Students must engage with a range of quantitative and relevant qualitative skills, within the theme water and carbon cycles. Students must specifically understand simple mass balance, unit conversions and the analysis and presentation of field data.	•120 marks •40% of A-level •Section A: answer all questions (36 marks) •Section B: answer either question 2 or question 3 or question 4 (36 marks)	

carbon sequestration in oceans and sediments, weathering.

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 on Earth.

Coastal systems and landscapes

This section of our specification focuses on coastal zones, which are dynamic environments in which landscapes develop by the interaction of winds, waves, currents and terrestrial and marine sediments.

Case study(ies) of coastal environment(s) at a local scale to illustrate and analyse fundamental coastal processes, their landscape outcomes as set out above and engage with field data and challenges represented in their sustainable management.

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

Students must engage with a range of quantitative and relevant qualitative skills, within the theme landscape systems. These should include observation skills, measurement and geospatial mapping skills and data manipulation and statistical

Systems in physical geography: systems concepts and their application to the development of coastal landscapes – inputs, outputs, energy, stores/components, flows/transfers, positive/regative feedback, dynamic equilibrium. Coastal landscape development This content must include study of a variety of landscapes from beyond the United Kingdom (UK) but may also include UK examples. Coastal management Human intervention in coastal landscapes 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.			
Spring	Changing Places (Paper 2: Section B) Contemporary Urban Environments (Paper 2: Section C)	The nature and importance of places The concept of place and the importance of place in human life and experience. Insider and outsider perspectives on place. Categories of place: • near places and far places • experienced places and media places. Factors contributing to the character of places: • Endogenous: location, topography, physical geography, land use, built environment and infrastructure, demographic and	Local place study exploring the developing character of a place local to the home or study centre. Contrasting place study exploring the developing character of a contrasting and distant place. Place studies must apply the knowledge acquired through engagement with prescribed specification content and thereby further enhance understanding of the way students' own lives and those of others are affected by continuity and change in the nature of places. Sources must include qualitative and quantitative data to represent places in the past and present. Both place studies must focus equally on:	Section B: Changing places Section C: Contemporary urban environments How it's assessed •Written exam: 2 hours 30 minutes •120 marks •40% of A-level •Section B: answer all questions (36 marks) •Section C: answer either question 3 or question 4 or question 5 (48 marks) •Question types: short answer, levels of response, extended prose	Geopolitics Current Affairs and Issues Equality and Diversity Sustainability Global Issues and challenges Global Development

- economic characteristics.
- Exogenous: relationships with other places.

Changing places – relationships, connections, meaning and representation

In relation to the local place within which students live or study and then at least one further contrasting place and encompassing local, regional, national, international and global scales:

- the ways in which the following factors: relationships and connections, meaning and representation, affect continuity and change in the nature of places and our understanding of place and
- the ways in which students' own lives

- people's lived experience of the place in the past and at present and either
- changing demographic and cultural characteristics
 or
- economic change and social inequalities.

Suitable data sources could include:

- statistics, such as census data
- maps
- geo-located data
- geospatial data, including geographic information systems (GIS) applications
- photographs
- text, from varied media
- audio-visual media
- artistic representations
- oral sources, such as interviews,

and those of others reminiscences, songs are affected by etc. continuity and change Students must engage with a in the nature of places and our understanding range of quantitative and qualitative approaches across of place. the theme as a whole. Quantitative data, including Relationships and the use of geospatial data, connections must be used to investigate The impact of relationships and present place and connections on people characteristics, particular and place with a particular weight must be given to focus on: qualitative approaches involved in representing place, either and to analysing critically the impacts of different media on changing demographic and place meanings and cultural characteristics perceptions. The use of different types of data should or allow the development of economic change and social critical perspectives on the inequalities. data categories and approaches. **Meaning and representation** Case studies of two The importance of the contrasting urban areas to meanings and representations illustrate and analyse key attached to places by people with a particular focus on people's lived experience of

place in the past and at themes set out above, to present. include: patterns of economic **Urbanisation** and social well-being Urbanisation and its • the nature and impact importance in human affairs. of physical Global patterns of urbanisation environmental since 1945. Urbanisation, conditions suburbanisation, counter-urbanisation, urban with particular reference to the resurgence. The emergence of implications for environmental megacities and world cities sustainability, the character of and their role in global and the study areas and the regional economies. experience and attitudes of their populations. **Urban change:** deindustrialisation, decentralisation, rise of service economy. Urban policy and regeneration in Britain since 1979. **Urban forms** Contemporary characteristics of mega/world cities. Urban characteristics in contrasting settings. Physical and human

factors in urban forms. Spatial

patterns of land use, economic inequality, social segregation and cultural diversity in contrasting urban areas, and the factors that influence them.
Urban climate
The impact of urban forms and processes on local climate and weather.
Urban drainage
Urban precipitation, surfaces and catchment characteristics; impacts on drainage basin storage areas; urban water cycle: water movement through urban catchments as measured by hydrographs.
Urban waste and its disposal
Urban physical waste generation: sources of waste - industrial and commercial activity, personal consumption.
Sustainable urban development

		Impact of urban areas on local and global environments. Ecological footprint of major urban areas. Dimensions of sustainability: natural, physical, social and economic. Nature and features of sustainable			
Summer	Non-Examined Assessment	All students are required to undertake fieldwork in relation to processes in both physical and human geography. Students must undertake four days of fieldwork during their A-level course. Fieldwork can be completed in a number of ways: locally or further afield, on full days or on part days. Schools and colleges will be required to confirm that all A-level geography students have been given an opportunity to fulfil this requirement. Students are required to undertake an independent investigation. This must incorporate a significant	They may incorporate field data and/or evidence from field investigations collected individually or in groups. What is important is that students work on their own on contextualising, analysing and reporting of their work to produce an independent investigation with an individual title that demonstrates required fieldwork knowledge, skills and understanding. The independent investigation must: • be based on a research question or issue defined and developed by the	Level 4 Detailed, effective, thorough, complete, well-developed. Overall description of level The research question(s) will be effectively identified and preliminary research will be thoroughly undertaken with well-understood and well-stated contexts. The methods of field investigation will be detailed and thorough with reasoned justification.	Learning outside the classroom

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element of fieldwork. The fieldwork undertaken as part of the individual investigation may be based on either human or physical aspects of geography, or a combination of both.	student individually to address aims, questions and/or hypotheses relating to any part of the specification content involve research of relevant literature sources and an understanding of the theoretical or comparative context for a research question/hypothesis incorporate the observation and recording of field data and/or evidence from field investigations that is of good quality and relevant to the topic under investigation involve justification of the practical approaches adopted in the field including frequency/timing of observation, sampling and data collection approaches	 The methods of critical analysis will be effective, developed and complete. The conclusions and evaluation will be thorough, effective and complete and the presentation will be logical and coherent. Level 3 Clear, secure, explicit, focused, precise, consistent. Overall description of this level The research question(s) will be securely identified and preliminary research will be focused with consistently understood and stated contexts. The methods of field investigation will be clear and relevant with explicit justification. 	

	 draw on the student's own research, including their own field data and/or secondary data, and their experience of field methodologies of the investigation of core human and physical processes demonstrate knowledge and understanding of the techniques appropriate for analysing field data and information and for representing results, and show ability to select suitable quantitative or qualitative approaches and to apply them demonstrate the ability to interrogate and critically examine field data in order to comment on its accuracy and/or the extent to which it is The methods of critical analysis will be clear, precise and consistent. The conclusions and evaluation will be clear, secure and focused and the presentation will be clear and precise. Level 2 Level 2 Level 2 Urermittent, partial, some, implicit, imprecise, inconsistent. Overall description of this level The research question(s) will be partial and preliminary research will be imprecise with inconsistently understood and stated contexts. The methods of field investigation will be intermittently applied with only some aspects justified.
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	representative, and use the experience to extend geographical understanding • require the student to independently contextualise, analyse and summarise findings and data, and to draw conclusions, by applying existing knowledge, theory and concepts to order and understand field observations and identify their relation to the wider context involve the writing up of field results clearly, logically and coherently using a range of presentation methods and extended writing demonstrate the ability to answer a specific geographical question drawing effectively on evidence and theory to
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make a well-argued case • require evaluation and reflection on the investigation including showing an understanding of the ethical dimensions of field research.	The conclusions and evaluation will be limited and generalised and the presentation will be basic.	
Independence Some stages of the investigation must be carried out independently. Other parts of the investigation may be carried out collaboratively, either as a class, group or pair. Independence is compulsory in the following stages of the investigation: • defining and developing a question or issue to address aims, questions and/or hypotheses relating to any aspect of the specification		

	 drawing on research, including field data and if relevant, secondary data which must be sourced by the student contextualising, analysing and summarising findings and data presenting data and drawing conclusions. Collaboration is allowed in the following stages of the investigation: exploring the focus of potential investigations collecting field data and/or evidence from field investigations.
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Health and Social Care

<u>Term</u>	Topic title(s) and overview	Knowledge/Key Questions	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Unit 1 AO1 Demonstrate knowledge of PIES across the human lifespan and factors affecting human growth and development Unit 5 A1 Promoting equality, diversity and preventing discrimination. Unit 1 AO3 Analyse and evaluate information related to development including theories/models and factors AO4 Make connections between theories/models and factors affecting human growth and development Unit 5 A2 Skills and personal attributes required for developing relationships with individuals.	Unit 1: Why are set milestones important when assessing development? Why do some individuals cope with the ageing process better than others? Unit 5: How does society benefit from diversity? What impact does discrimination have on individuals and a community? Unit 1: How relevant are theories of development in contemporary society? Unit 5: Why is it important that services users trust the professionals working with them? How does the theory of attachment influence the approach staff should use when trying to establish a trusting relationship with their service users?	Unit 1: Describe, discuss, evaluate, identify, justify, to what extent. Developing exam skills to answer questions ranging from 3 to 6 marks Unit 5 A.P1 Explain the importance of A.M1 Analyse the impact of A.D1 Evaluate the success of Unit 1: Describe, discuss, evaluate, identify, justify, to what extent. Develop exam skills to answer questions ranging from 10 to 12 marks Unit 5 A.P2 Explain the skills and personal attributes A.M2 Assess different methods used by Professionals.	Unit 1: Assessment: Pre-Public Examination Unit 5: Assessment Coursework Task 1 – Promoting equality and Diversity in HSC Unit 1: Assessment: External examination Unit 5: Assessment Coursework Task 2 – Skills and Attributes required to promote positive relationships in HSC	Synthesising information from a range of sources. Developing empathy Understanding cultural differences

Spring	Unit 5 B1 Examine the ethical issues involved when providing care and support to meet individual needs B2 Legislation and guidance on conflicts of interest, balancing resources and minimising risk. Unit 5 C1 Investigate the principles behind enabling individuals with care and support needs to overcome challenges C2 Promoting personalisation when meeting the needs of individuals C3 Identifying barriers to communication and overcoming these barriers.	How does legislation influence procedures in a HSC setting? What rights do individuals have when using HSC settings? What challenges might staff face when trying to meet the demands of many service users, and how might these challenges be met? How does the communication theories link to effective communication and support identifying barriers to communication? How might modern technology be used to overcome communication challenges faced by individuals using HSC services?	Unit 5 B.P3 Explain how to incorporate ethical principles into the provision of support for individuals B.M3 Analyse how an ethical approach to providing support would benefit individuals BC.D2 Justify the strategies and techniques used. Unit 5 C.P4 Explain the strategies and communication techniques used. C.P5 Explain the benefits of promoting personalisation C.M4 Assess the strategies and communication techniques. BC.D2 Justify the strategies	Unit 5: Assessment Coursework Task 3 – Working ethically in HSC Unit 5: Assessment Coursework Task 4 – effective communication in HSC	Validating sources of information Extended research task to include qualitative and quantitative information. Comprehensive literacy task applying key terminology, theories and ideas, in context.
Summer	Unit 5 D Investigate the roles of professionals and how they work together to provide the care and support necessary to meet needs. D1 Evaluate how agencies work together D2 Evaluate roles and responsibilities of key professionals on multidisciplinary teams.	How does working as part of a multi-agency team benefit the service users and the organisations working with them? What challenges may professionals face when working in a multi-disciplinary or multi-agency team? Why are clear roles and responsibilities	Unit 5 D.P6 Explain the need for multidisciplinary teams. D.P7 Explain the roles and responsibilities of different members. D.M5 Assess the benefits of multidisciplinary working D.D4 Evaluate how multidisciplinary	Unit 5: Assessment Coursework: Task 5a – Multiagency and multi-disciplinary working in HSC Unit 5: Assessment Coursework: Task 5b – Information sharing in HSC	Validating sources of information Extended research task to include qualitative and quantitative information. Comprehensive literacy task applying key terminology, theories and ideas, in context.

	Unit 5 D Investigate the roles of professionals and how they work together to provide the care and support necessary to meet individual needs. D3 Maintaining confidentiality D4 Managing information.	essential to work within a team effectively? What influence does the Data protection Act and GDPR have on the sharing and storing of information? What methods are used to share information across a multi-agency team, and what steps need to be taken to ensure they don't break GDPR? What are the effects of breaking GDPR on the service user?	working can meet the care and support needs Unit 5 D.P8 Explain the arrangements for managing information between professionals. D.M6 Analyse the impact of legislation and codes of practice. D.D3 Justify how organisations and professionals work together while maintaining confidentiality.		
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History

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Paper 1, Option 1H: Britain transformed, 1918–97 - Mrs Wood 1 A changing political and economic environment, 1918–79 2. Creating a Welfare state 1918-79 Paper 2, Option 2H.2: The USA, 1955–92: conformity and challenge Ms Young 1. Affluence and conformity 1955-63 2. Protest and reaction 1963-72 3. Social and political change, 1973–80	Paper 1 Unit 1: Governments of the period. Economic challenges Change in working relations Paper 1 Unit 2: Creation of the Welfare State Public health developments Education developments	AO1 Demonstrate, organise and communicate knowledge and understanding to analyse and evaluate the key features related to the periods studied, making substantiated judgements and exploring concepts, as relevant, of cause, consequence, change, continuity, similarity, difference and significance 55 AO2 Analyse and evaluate appropriate source material, primary and/or contemporary to the period, within its historical context 20 AO3 Analyse and evaluate, in relation to the historical context, different ways in which aspects of the past have been interpreted	Paper 1 - AO1 Paper 2 - AO1 and AO2	Equality - GB - experience for striking workers and vote for women USA - civil rights campaign Diversity GB - post WW2 immigration, Windrush USA - civil rights, gay rights, women's rights SMSC - GB - creation of the welfare state, worker and voter rights, gay rights, changing culture

Spring	Paper 1: 3. Society in transition, 1918–79 4. The changing quality of life, 1918–79 5. What impact did Thatcher's governments (1979–90) have on Britain, 1979–97? Paper 2: 4. Republican dominance and its opponents, 1981–92	Paper 1: Unit 3 Social class Changing role of women Race and immigration Paper 1: Unit 4 Changing standard of living Popular culture and entertainment Leisure and travel Paper 1 Unit 5: Effect of Thatcher's policies on economy and society Paper 2: Unit 4	Interpretations - Thatcher Sources and essay writing Revision	Paper 1 - AO1 and AO3 Paper 2 - AO1 and AO2	USA - workers, women, gay rights, changing culture
		Paper 2: Unit 4 Reagan economic policy Religious right Cultural challenges Social change			
Summer	Revision and Coursework background knowledge and skills - The Holocaust	Background preparation of the Holocaust	Academic research Revision	Paper 1 - AO1 and AO3 Paper 2 - AO1 and AO2	

		Coursework - AO3
		Mock exam

Maths

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	 1.1 Algebraic Expressions 1.2 Quadratics 1.3 Equations and Inequalities 1.4 Graphs and Transformations 1.5 Straight Line Graphs 1.6 Circles 1.7 Algebraic Methods 1.8 Binomial Expansion 1.11 Vectors 1.12 Differentiation 1.13 Integration 	Overarching theme 1: Mathematical argument, language and proof Overarching theme 2: Mathematical problem solving Overarching theme 3: Mathematical modelling	A Level Mathematics students must use mathematical notation and be able to recall the mathematical formulae and identities. OT1 Construct and present mathematical arguments through appropriate use of diagrams; sketching graphs; involving the correct use of symbols and connecting language, including the following: constant, coefficient, expression, equation, function, identity, index, term, variable. OT2 Recognise the underlying mathematical structure in a situation and simplify an abstract concept appropriately to enable problems to be solved. OT3 Translate a situation in context into a mathematical	3 exam style assessments based on taught chapters (1 hour each) 1.1 and 1.5 1.6 and 1.11 1.3 and 1.4	

			model, making simplifying assumptions.		
Spring	1.7 Algebraic Methods 1.8 Binomial Expansion 1.14 Exponentials and logarithms 2.1 Data Collection 2.2 Measures of Location and Spread 2.3 Representations of Data 2.4 Correlation 2.5 Probability 2.6 Statistical Distributions 2.7 Hypothesis Testing 2.8 Modelling in Mechanics 2.9 Constant Acceleration 2.10 Forces and Motion	Overarching theme 1: Mathematical argument, language and proof Overarching theme 2: Mathematical problem solving Overarching theme 3: Mathematical modelling	ort Understand and use mathematical language and syntax as set out in the content. Ort Understand and use language and symbols associated with set theory, as set out in the content. Apply to solutions of inequalities and probability. Ort Understand the concept of a mathematical problem-solving cycle, including specifying the problem, collecting information, processing and representing information and interpreting results, which may identify the need to repeat the cycle. Ort Understand, interpret and extract information from diagrams and construct mathematical diagrams to solve problems, including in mechanics.	2 exam style assessments based on taught chapters (1 hour each) 1.13 and 1.14 2.2 and 2.3 One 2 hour 'mock' style assessment on topics done	

			OT3 Use a mathematical model with suitable inputs to engage with and explore situations (for a given model or a model constructed or selected by the student).		
Summer	1.9 Trigonometric Ratios 1.10 Trigonometric Identities 1.14 Exponentials and Logarithms 2.7 Hypothesis Testing 2.10 Forces and Motion 2.11 Variable Acceleration Start Year 13 topics: 1.1 Algebraic Fractions 1.2 Functions and Graphs	Overarching theme 1: Mathematical argument, language and proof Overarching theme 2: Mathematical problem solving Overarching theme 3: Mathematical modelling	OT1 Comprehend and critique mathematical arguments, proofs and justifications of methods and formulae, including those relating to applications of mathematics. OT2 Interpret and communicate solutions in the context of the original problem. OT3 Interpret the outputs of a mathematical model in the context of the original situation (for a given model or a model constructed or selected by the student). OT3 Understand and use modelling assumptions.	1 exam style assessments based on taught chapters (1 hour each) 2.9 and 2.10 2 mock exams (one pure, one stats and mechanics)	

Media

<u>Term</u>	Topic title(s) and overview	Knowledge	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Unit 20: Single Camera Production (60 hours)	What a single camera production is. Different types of SCPs Different types of camera shots and angles and how/why they are used. What continuity in media production means	Report writing. How to use a camera and tripod setup. Research skills. Analysis skills.	Unit 20: A: Understand single camera productions	
	Unit 25: Sound Recording (60 hours)	Explore theory and practice of sound recording. Explore signal paths and levels alongside audio file formats. Types of sound recording equipment available (mounts, accessories, applications, placements) Correct sound recording procedures.	Report writing. Setting up of sound equipment. Correct procedures for using sound equipment. Analysis skill.	Unit 25: A: Understand sound recording equipment, techniques and technology.	
Spring	Unit 20: Single Camera Production	What a production log is. Knowledge of production rushes. Knowledge of the post-production process.	Filming and editing skills.	Unit 20: B: Explore single camera techniques Unit 20: C: Produce a single camera production.	

		Knowledge of linear editing and Adobe Premiere tools.			
	Unit 25: Sound Recording	Principle of sound and its workings. Interior and exterior acoustic settings and considerations when recording.	Planning. Time management. Independent learning. Creation of a portfolio.	Unit 25: B: Produce a portfolio of sound recordings that shows the effects of location and acoustics on recorded sound.	
		Working to a set brief. Setting up of sound equipment. Use of sound equipment. Recording sounds.		Unit 25: C: Produce recorded unedited sound in different acoustic settings.	
Summer	Unit 19 Script Writing			Unit 21: A: Unit 21: B:	
	Unit 19 Script Writing			Unit 21: C:	

Photography

<u>Term</u>	Topic title(s) and overview	Knowledge	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	https://www.eduqas.co.uk/media /a3ndenvr/eduqas-a-level-art-an d-design-spec-from-2015-e-0901 19.pdf Foundation studies	What is exposure and why does it matter? Why is composition important in photography? Studio lighting photographing people photographing places still-life photography documentary photography photojournalism		Learners must demonstrate their ability to: AO1 Develop ideas through sustained and focused investigations informed by contextual and other sources, demonstrating analytical and critical understanding. AO2 Explore and select appropriate resources, media, materials, techniques and processes, reviewing and refining ideas as work develops. AO3 Record ideas, observations and insights relevant to intentions, reflecting critically on work and progress. AO4 Present a personal and meaningful response that realises intentions and, where appropriate, makes	

		experimental imagery photographic installation fashion photography digital imaging		connections between visual and other elements.	
Spring	January	Advanced digital and manual manipulation techniques			
		Moving image (video, film, animation)			
	February	The darkroom The enlarger How and Enlarger works/diagrams and label of the various parts.	Diagram/picture of the dark Room and safety factors - to include;- (Red spots, chemicals, enlargers, equipment list – drip trays/tongs/negative/rule etc, board/filters/timer/development tanks and reel. How to develop, Stop, Fix and Wash prints in the dark room.		
			Film Camera – : How to Spool Film – Practice 1 hour. How to develop film in a development		

	tank, including timings and process. How to produce a contact sheet + your contact sheet. How to do a test strip + your test strip. Develop your film and dry Produce 8 – 10 original dark room prints from your film on the enlarger. Experimental dark room techniques You will need one example of each method -: Annotate your work to explain what you have done for each effect. 1 Folded paper 2 Crumpled paper 3 Developer Sponged, 4 Rolled paper 5 Developed layered on 7 Brushed on developer cross hatch 8 Paper moved under enlarger 9 Paper tilted under enlarger
Summer	

(click here to go back to main menu).
Psychology

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Social Influence Memory Research methods	Conformity, obedience, resistance to social influence, minority influence Multi-store and working memory models, types of long-term memory, explanations for forgetting, accuracy of eye-witness testimony Experiments, observations, self-report methods, correlations; hypotheses & variables; sampling techniques; ethics; data types.	AO1: demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures. AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence.	Exam style assessments at the end of each taught unit. Shorter assessments set as independent work and homework.	
Spring	Attachment Approaches in Psychology	Stages of attachment, animal studies of attachment; explanations of attachment; Ainsworth's 'strange situation' & types of attachment; Bowlby's theory of maternal deprivation, influence of attachment on adult relationships.	AO1: demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures. AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures.	Exam style assessments at the end of each taught unit. Shorter assessments set as independent work and homework.	

	Psychopathology	Behaviourist approach, Pavlov, Skinner & Bandura's research Cognitive approach, schema & cognitive neuroscience Biological approach, genetics, evolution and neurochemistry Definitions of abnormality; characteristics of phobias, depression & OCD; behavioural treatments for phobias; cognitive treatments for depression; biological treatments for OCD.	AO3: Analyse, interpret and evaluate scientific information, ideas and evidence.		
Summer	Biopsychology Research methods Revision and mock exams	The structure and function of the nervous system; endocrine system and hormones Pilot studies, peer review process, research and the economy; descriptive statistics, distributions and data presentation; introduction to statistics and the sign test.	AO1: demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures. AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures. AO3: Analyse, interpret and evaluate scientific information, ideas and evidence.	Exam style assessments at the end of each taught unit. Shorter assessments set as independent work and homework.	

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Chapter 3 - Motion Chapter 4 - Forces in action Chapter 5 - Work, energy and power.	 Quantities and units Scalar and vector quantities Adding & resolving vectors. Distance and speed. Displacement and velocity Acceleration Velocity-time graphs Equations of motion Stopping distances Free fall and g Projectile motion. Force, mass and weight Centre of mass Free-body diagrams Drag and terminal velocity Moments and equilibrium Couples and torques Triangle of forces Density and pressure Archimedes principle Work done and energy Conservation of energy Kinetic energy and GPE Power and efficiency 	 Understand practical techniques and processes Selectinge apparatus and equipment Selecting appropriate techniques Selecting appropriate quantities of materials and substances and scale of working Solving physical problems in a practical context Applying physics concepts to practical problems Identify hazards and safe procedures Using SI units Recording qualitative observations accurately Recording a range of qualitative measurements Using the appropriate precision for apparatus Analysing quantitative observations 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills.	Students will learn about how design should benefit society by creating better outcomes for people. This will include looking at inclusive design, how people are different but equality is what binds society together. Students learn about H&S and safe working practices to avoid injury. Students learn about the manufacturing and design industries and careers within this sector, which also includes trips, and visits to exhibitions, professional places of work, universities and site visits.

			 Analysing quantitative experimental data Selecting and labelling axes with appropriate scales, quantities and units. Drawing tangents and measuring gradients. Reaching conclusions from qualitative observations Identifying uncertainties and calculating percentage errors Identifying procedural and measurement errors Refining procedural and measurements to suggest improvements 		
Spring	Chapter 6 - Materials Chapter 7 - Laws of motion and momentum. Chapter 8 - Charge and current Chapter 9 Energy, power and resistance. Chapter 10 Electrical circuits	 Springs and Hooke's law EPE Deforming materials Young modulus Newton's laws Linear momentum Impulse Collisions in 2D Current and charge Moving charges Kirchhoff's laws 	 Selectinge apparatus and equipment Selecting appropriate techniques Selecting appropriate quantities of materials and substances and scale of working Solving physical problems in a practical context 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills.	

Mean drift and velocity Circuit symbols PD and Electromotive force Electron gun Resistance I - V characteristics Diodes Resistance and resistivity Thermistor LDR Electrical energy and power Paying for electricity Combining resistors Analysing circuits Internal resistance Potential divider circuits Sensing circuits

Summer	Chapter 11 - Waves 1 Chapter 12 - Waves 2 Chapter 13 - Quantum physics	 Progressive waves Wave properties Reflection & refraction Diffraction and polarisation Intensity Electromagnetic waves Polarisation of EM waves Refractive index Internal reflection Superposition of waves Interference Young double slit experiment Stationary waves Harmonics Stationary waves in air Photon model Photoelectric effect Einsteins photoelectric effect equation Wave particle duality 	 Selectinge apparatus and equipment Selecting appropriate techniques Selecting appropriate quantities of materials and substances and scale of working Solving physical problems in a practical context Applying physics concepts to practical problems Identify hazards and safe procedures Using SI units Recording qualitative observations accurately Recording a range of qualitative measurements Using the appropriate precision for apparatus Analysing quantitative observations Analysing quantitative experimental data Selecting and labelling axes with appropriate scales, quantities and units. 	Assessment point to include; levelled response questions for extended writing, timed MCQ's, analytical questions that include maths skills. Summative assessment of Module 1, 2, 3 & 4 to assess extended recall, application of knowledge and evaluative skills (AO1, AO2, AO3).	

	 Drawing tangents and measuring gradients. Reaching conclusions from qualitative observations Identifying uncertainties and calculating percentage errors Identifying procedural and measurement errors Refining procedural and measurements to suggest improvements
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Product Design

<u>Term</u>	Topic title(s) and overview	Knowledge	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Students will undertake a series of diagnostic projects until Easter to work through some of the key concepts and skills required to confidently research, design, prototype, test and revise their products. These will include; Iteration Ergonomics Inclusive design Sustainability Sketching Technical 3D drawing Cad Prototyping User testing.	Identifying requirements Learning from existing products and practice Implications of wider issues	 Researching Analysis Annotation Freehand sketching Rendering Oblique drawing Isometric drawing CAD Card modelling Blue foam modelling Laser Cutting 3D Printing 	Students will work through various diagnostic projects which will be assessed using the appropriate sections of the NEA mark scheme. For their knowledge and theory work, students will have end of chapter tests to assess what they have learnt from each unit using google form tests to support exam prep. They will sit a mock exam each term to create a understanding progress and as a means of getting students used to the requirements of their final exam.	

Spring	Pupils will continue to work through the above concentrating of different key skills, design strategies and materials.	 Design thinking and communication Material and component considerations Technical understanding 	 Orthographic drawing Workshop skills: H&S Cutting Abrasive subtraction Drilling Wood/metal/plastic turning Soldering Brazing Casting 	As above	
Summer	Students will begin the preparation towards their Final NEA in the form of researching individual design contexts drafting briefs.	 Manufacturing processes and techniques Viability of design solutions Health and safety. 	Students will be working towards their NEA project which will continue to build and refine their drawing and prototyping skills at this stage ready for testing and further iterations.	Students will use the NEA assessment to grade their work so far.	

Sociology

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Introduction to theory and research methods Ms Lewis - Crime and deviance Ms Young - Education	Crime and deviance: Construction of crime, recording, criminal subcultures, labelling, functionalist and Marxist theory of crime, recording and reporting crime, ethnicity Education: Government and social educational policies, globalisation, setting and streaming.	AO1: Demonstrate knowledge and understanding of: - sociological theories, concepts and evidence • sociological research methods • AO2: Apply sociological theories, concepts, evidence and research methods to a range of issues • AO3: Analyse and evaluate sociological theories, concepts, evidence and research methods in order to: • present arguments • make judgements • draw conclusions	Review end of each half term on each topic	Equality and diversity - gender, racial, social SMSC: patriarchy, social class, different perspectives Reaching conclusions
Spring	Ms Lewis - Crime and deviance Ms Young - Education	Crime and deviance: gender, social class, methods in context, globalisation Education: internal and external factors influencing achievement, social class, gender,	All AOs	Review end of each half term on each topic	

Summer	Ms Lewis - Crime and deviance Ms Young - Education	Crime and deviance: prevention and punishment, methods in context, revision Education: ethnicity, methods in context, revision	Review the end of each half term on each topic.	
			Mock exam	

<u>Term</u>	Topic title(s) and overview	Knowledge	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Unit 22 - Investigating Business in the Sport and active Leisure Industry Learners investigate how business operates in the sport and active leisure industry and how it responds to trends and other influences to meet the needs of clients and to benefit the business.	A Features of sports and active leisure businesses (business operations) A1 Features and organisation of sport and active leisure businesses A2 Aims and objectives of sport and active leisure businesses A3 Provision of sports facilities, programmes and services A4 Customer groups in a sport and active leisure business A5 Stakeholders and their influence on sports and active leisure businesses A6 Laws, legislation and safeguarding relevant to the sport and active leisure industry B Business models in sport and active leisure	In this unit, you will investigate industry trends, changes and other developments such as technology, to explore how they can affect the performance, and ultimately the success, of businesses. You will use given data and other information to make recommendations on how a business should adapt and develop to take full advantage of market opportunities, while at the same time looking at how to reduce the potential effects of threats and risks. To complete the assessment task within this unit, you will need to draw on your learning from across your programme. This unit will help you to make an informed choice as to whether you want to continue your studies to higher education or develop your career in the	AO1 Demonstrate knowledge and understanding of sport and active leisure business operations and how to respond to trends and internal and external influences AO2 Analyse and interpret business information and data, and their potential impact and influence on a sport and active leisure business AO3 Evaluate evidence to make informed judgements on how a sport and active leisure business should be developed, diversified or adapted AO4 Be able to make justified recommendations for a sport and active leisure business, synthesising ideas and evidence from several sources to support arguments	Building career aspirations Diverse knowledge of sporting industries Clear career pathways Work experience opportunities Opportunities to develop public speaking skills Opportunities to work in teams Opportunities to lead Knowledge of opportunities available in the local community Club and employment links

Unit 17: Sports Injury Management Learners study the signs and symptoms of sports injuries, application of basic treatment and rehabilitation methods, injury risk factors and injury prevention.	D2 Meeting the needs of the customer in a sport and active leisure business E Finance in sport and active leisure industry E1 Financing a business in sport and active leisure E2 Financial records F Trends in the sport and active leisure industry F1 Trends F2 Developing products/services to take advantage of trends in the sports and active leisure industry Learning aim A: Understand common sports injuries and their associated physiological and psychological responses A1 Acute injuries A2 Overuse injuries	You will recognise the injury symptoms and understand physiological and psychological responses to injury, and will be able to make an informed decision regarding treatment at the time of injury. You will be able to confidently and effectively apply first aid techniques and common treatment methods, and develop a functional rehabilitation program. Finally, you will be able to minimise the risk of injury and remove	A Understand common sports injuries and their associated physiological and psychological responses A report and presentation focussing on types of injuries, symptoms, associated mechanisms of injury and physiological and psychological responses to injury.	
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A3 Red flag symptoms with regards to suspected spinal injury A4 Physiological response to injury A5 Psychological response to injury

Learning aim B: Explore common treatment and rehabilitation methods
B1 Common treatment methods and the need for medical referral B2 Principles of rehabilitation
B3 Methods of rehabilitation

C Investigate risk factors which may contribute to sports injuries and their associated prevention strategies

C1 Extrinsic risk factors
C2 Intrinsic risk factors
C3 Preventative measures

any factors which may predispose a person to injury. You will understand the components of the 'sequence of prevention' model, and introduce preventative measures in order to reduce risk and prevent injury occurrence. This unit will be useful for you if you intend to pursue a career in the sports sector. Although this unit is not designed to develop you into an accomplished sports therapist, you will be able to act appropriately to sports injuries. This unit will form a good basis for aspects of higher education study in sport, and sport and exercise science-related qualifications.

B Explore common treatment and rehabilitation methods

Development and justification of a rehabilitation programme, supported by effective and confident practical application of a range of common treatment methods, and oral questioning with regards to medical referral in response to given case study scenarios.

C Investigate risk factors which may contribute to sports injuries and their associated prevention strategies

An extended essay focusing on intrinsic and extrinsic risk factors, preventative measures and the sequence of prevention model. An extended essay focussing on the importance on sports injury management in helping sports

				performers to prevent or overcome injury	
Spring	Unit 1: Anatomy and Physiology Learners explore how the skeletal, muscular, cardiovascular and respiratory systems function and the fundamentals of the energy systems	A The effects of exercise and sports performance on the skeletal system A1 Structure of skeletal system A2 Function of skeletal system A3 Joints A4 Responses of the skeletal system to a single sport or exercise session A5 Adaptations of the skeletal system to exercise A6 Additional factors affecting the skeletal system B The effects of exercise and sports performance on the muscular system	You will gain a full appreciation of how the body is able to take part in sport and exercise through understanding the interrelationships between these body systems. This unit will give you the detailed core knowledge required to progress to coaching and instruction in the sports industry or further study.	AO1 Demonstrate knowledge of body systems, structures, functions, characteristics, definitions and other additional factors affecting each body system Command words: describe, give, identify, name, state Marks: ranges from 1 to 4 marks AO2 Demonstrate understanding of each body system, the short- and long-term effects of sport and exercise on each system and additional factors that can affect body systems in relation to exercise and sporting performance Command words: describe, explain, give, name, state Marks: ranges from 1 to 4 marks	

B1 Characteristics and functions of different types of muscles
B2 Major skeletal muscles of the muscular system
B3 Antagonistic muscle pairs

B4 Types of skeletal muscle contraction

B5 Fibre types

B6 Responses of the muscular system to a single sport or exercise session

B7 Adaptations of the muscular system to exercise **B8** Additional factors affecting the muscular system

C The effects of exercise and sports performance on the respiratory system

C1 Structure of the respiratory system

C2 Function

C3 Lung volumes

C4 Control of breathing

C5 Responses of the respiratory system to a single sport or exercise session

AO3 Analyse exercise and sports movements, how the body responds to short-term and long-term exercise and other additional factors affecting each body system Command words: analyse, assess Marks: 6 marks

AO4 Evaluate how body systems are used and how they interrelate in order to carry out exercise and sporting movements Command words: assess, evaluate Marks: 6 marks

AO5 Make connections between body systems in response to short-term and long-term exercise and sport participation. Make connections between muscular and all other systems, cardiovascular and respiratory systems, energy and cardiovascular systems Command words: analyse,

C6 Adaptations of the respiratory system to exercise C7 Additional factors affecting the respiratory system	assess, discuss, evaluate, to what extent Marks: 8 marks	
D The effects of sport and exercise performance on the cardiovascular system		
D1 Structure of the cardiovascular system D2 Function of the cardiovascular system D3 Nervous control of the cardiac cycle D4 Responses of the cardiovascular system to a single sport or exercise session D5 Adaptations of the cardiovascular system to exercise D6 Additional factors affecting		
the cardiovascular system E The effects of exercise and sports performance on the energy systems E1 The role of ATP in exercise		

Unit 5: Application of Fitness Testing

Learners gain an understanding of the requirements of fitness testing and learn how to safely conduct a range of fitness tests for different components of fitness. **E2** The ATP-PC (alactic) system in exercise and sports performance

E3 The lactate system in exercise and sports performance

E4 The aerobic system in exercise and sports performance

E5 Adaptations of the energy system to exercise

E6 Additional factors affecting the energy systems

A Understand the principles of fitness testing

A1 Validity of fitness tests
A2 Reliability of fitness tests
A3 Practicality and suitability
of fitness tests

A4 Ethical issues associated with fitness screening

B Explore fitness tests for different components of fitness

B1 Fitness tests to assess components of physical fitness

In this unit, you will explore the principles of fitness testing and examine the factors affecting the selection and administration of tests. including validity, reliability and suitability of tests. You will explore a range of laboratory and field-based fitness tests and the administration process of each fitness test. You will consider the selection of appropriate tests for specific sports performers, and demonstrate your ability to conduct a range of fitness tests in accordance with the safety and ethical requirements of fitness testing. Finally, you will investigate the process of evaluating and comparing fitness test results to draw meaningful conclusions about a specific person's fitness. These

A Understand the principles of fitness testing

A report on the principles of fitness testing, including practicality, suitability and ethics of fitness testing. A presentation justifying the selection of fitness tes

B Explore fitness tests for different components of fitness

A report that interprets the test results, analyses the test administration and makes recommendations for improvements to test administration practice, supported by observation and video evidence of fitness

		B2 Fitness tests to assess components of skill-related fitness B3 Planning of tests B4 Administration of tests C Undertake evaluation and feedback of fitness test results C1 Produce a fitness profile for a selected sports performer C2 Providing feedback to a selected sports performer	activities will prepare you for a variety of careers in the sport sector, such as coaching, fitness instruction and working with elite sport performers. This unit will form a good basis for aspects of higher education study in sport and sport and exercise science-related qualifications.	testing administration and recorded results from each test. C Undertake evaluation and feedback of fitness test results A written fitness profile for a selected sports performer, supported by evidence of interpretation of fitness test results related to the selected sports performer. A report that evaluates the effectiveness of fitness testing and feedback methods, supported by observation/ video/verbal recordings of feedback session to selected sports performer.	
Summer	Unit 1: Anatomy and Physiology Learners explore how the skeletal, muscular, cardiovascular and respiratory systems function and the fundamentals of the energy systems	A The effects of exercise and sports performance on the skeletal system A1 Structure of skeletal system A2 Function of skeletal system A3 Joints	You will gain a full appreciation of how the body is able to take part in sport and exercise through understanding the interrelationships between these body systems. This unit will give you the detailed core knowledge required to	AO1 Demonstrate knowledge of body systems, structures, functions, characteristics, definitions and other additional factors affecting each body system Command words: describe, give, identify, name,	

A4 Responses of the skeletal progress to coaching and state Marks: ranges from 1 to system to a single sport or instruction in the sports 4 marks industry or further study. exercise session **AO2** Demonstrate **A5** Adaptations of the skeletal understanding of each body system to exercise system, the short- and A6 Additional factors affecting long-term effects of sport and the skeletal system exercise on each system and additional factors that can B The effects of exercise affect body systems in relation and sports performance on to exercise and sporting the muscular system performance Command words: describe, explain, give, name, **B1** Characteristics and state Marks: ranges from 1 to functions of different types of 4 marks muscles **B2** Major skeletal muscles of AO3 Analyse exercise and the muscular system sports movements, how the **B3** Antagonistic muscle pairs body responds to short-term **B4** Types of skeletal muscle and long-term exercise and contraction other additional factors **B5** Fibre types affecting each body system **B6** Responses of the muscular Command words: analyse, system to a single sport or assess Marks: 6 marks exercise session **B7** Adaptations of the **AO4** Evaluate how body muscular system to exercise systems are used and how **B8** Additional factors affecting they interrelate in order to the muscular system carry out exercise and sporting

movements Command words:

C The effects of exercise	assess, evaluate Marks: 6
and sports performance on	marks
the respiratory system	
	AO5 Make connections
C1 Structure of the respiratory	between body systems in
system	response to short-term and
C2 Function	long-term exercise and sport
C3 Lung volumes	participation. Make
C4 Control of breathing	connections between muscular
C5 Responses of the	and all other systems,
respiratory system to a single	cardiovascular and respiratory
sport or exercise session	systems, energy and
C6 Adaptations of the	cardiovascular systems
respiratory system to exercise	Command words: analyse,
C7 Additional factors affecting	assess, discuss, evaluate, to
the respiratory system	what extent Marks: 8 marks
D The effects of sport and	
exercise performance on the	
cardiovascular system	
Cardiovascular system	
D1 Structure of the	
cardiovascular system	
D2 Function of the	
cardiovascular system	
D3 Nervous control of the	
cardiac cycle	
D4 Responses of the	
cardiovascular system to a	

		,		,
	single sport or exercise session D5 Adaptations of the cardiovascular system to exercise D6 Additional factors affecting the cardiovascular system			
	E The effects of exercise and sports performance on the energy systems			
	E1 The role of ATP in exercise E2 The ATP-PC (alactic) system in exercise and sports performance			
	E3 The lactate system in exercise and sports performance E4 The aerobic system in			
Unit 25: Rules, Regulations and	exercise and sports performance E5 Adaptations of the energy			
Officiating in Sport Learners explore the historical development of the rules and regulations in a selected sport,	system to exercise E6 Additional factors affecting the energy systems			
and apply them while officiating.	A Understand the development of the roles		A Understand the development of the roles	

and responsibilities of the officials involved in sport

A1 NGB rules/laws and regulations in different sports **A2** Officials and their historical development

A3 Roles of the officials

A4 Responsibilities of the officials

A5 Current issues in officiating in sport

B Explore the performance of officials in a selected sport

B1 Applying rules/laws and regulations to different situations

B2 Analysing officials in different sports

C Undertake the role of a match official in a competitive sport

C1 Officiating in a full match/gameC2 Review own performance

In this unit, you will gain an understanding of the rules and regulations in a selected sport and explore historical developments that have led to the change of rules and regulations, including factors that have, and could influence future change. As part of this unit you will explore the changing roles of match/game officials in a selected sport, which will include the career opportunities at both amateur and elite levels. This exploration will support you to undertake the role of an officiator for a sport and apply the relevant sport's National Governing Body (NGB) regulations. You will then assess your own performance using a variety of assessment methods. There are clear career pathways for those that would like to pursue a career as an official in sport. Key governing bodies have begun to look to the younger generations to start officiating

and responsibilities of the officials involved in sport

A written report discussing how the official's roles and responsibilities have evolved.

B Explore the performance of officials in a selected sport

A written report/video analysis of officials' performance and identifying how the rules/laws and regulations were applied.

C Undertake the role of a match official in a competitive sport

A practical demonstration evidenced through observation reports/video evidence of learners officiating in a selected sport, applying the correct rules and regulations in a controlled environment. A

	as early as possible, and build up their experience as match officials. By developing your understanding of the rules, regulations and requirements of officiating, this unit will help you to progress to employment as a coach, PE teacher or an administrator for an NGB.	written report analysing own performance of officiating in a selected sport using witness testimony/questionnaires.	
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Travel and Tourism

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	Skills	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	Unit 1: The world of travel and tourism	You will gain an understanding of the scope of the industry, its terminology and its key components. Travel and tourism is a business with the customer at the forefront. Different types of organisation have different roles and offer a range of products and services to many different types of customer. You will need to understand how the organisations work together to benefit both themselves and their customers and you should be able to name examples of the key organisations in all sectors. A Types of travel and tourism There are different types of tourism and many purposes for travel. These will vary	The travel and tourism industry in the UK is growing and is of major importance to the economy. In this unit, you will develop the skills needed to examine, interpret and analyse a variety of statistics that measure the importance of tourism to the UK	This unit is assessed by a written examination set and marked by Pearson. The examination will be 1.5 hours in length. The number of marks for the examination is 75. The assessment availability is January and May/June each year.	Geopolitics Government policy and legislation Economy/GDP/Industry

		according to customer type and need. B The types of travel and tourism organisations, their roles and the products and services they offer to customers C The scale of the travel and tourism industry D Factors affecting the travel and tourism industry			
Spring & Summer	Unit 2: Global Destinations	This unit will enable you to progress to higher-education courses by developing your knowledge of how to carry out research and make decisions based on information from a variety of sources. It will also help prepare you for a career in the travel and tourism industry as you apply geographical knowledge and evaluate travel and tourism data in order to meet a given brief.	In this unit, you will use a range of resources to investigate the location and features of global destinations and explain the features that give appeal to global destinations and support different types of tourism. You will evaluate how travel plans/routes/itineraries meet customer needs. You will investigate consumer trends and the reasons the popularity of global destinations may change.	This unit is assessed under supervised conditions. Learners will be given information two weeks before a supervised assessment period to carry out research. The supervised assessment period is a maximum of three hours in a single session as timetabled by Pearson. During the supervised assessment session, learners will be given a set task that will assess their ability to explain features of destinations and recommend	Global Citizenship Money management Planning and Marketing

A Geographical awareness, locations and features giving appeal to global destinations B Potential advantages and disadvantages of travel options to access global destinations C Travel planning, itineraries, costs and suitability matched to customer needs D Consumer trends, motivating and enabling factors and their potential effect on the popularity and appeal of global destinations E Factors affecting the popularity and appeal of destinations	their suitability to meet different customer needs. Learners will also be assessed on their ability to assess travel plans and justify how they meet customer needs. The task will assess learners' ability to evaluate the appeal and popularity of destinations. Pearson sets and marks the task. The number of marks for the unit is 60.
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Further Maths

<u>Term</u>	Topic title(s) and overview	<u>Knowledge</u>	<u>Skills</u>	Assessment	Wider learning (Equality and diversity, SMSC, cultural capital)
Autumn	P1.1 Complex Numbers P1.2 Argand Diagrams P1.3 Series P1.4 Roots and Polynomials P1.6 Matrices P1.7 Linear Transformations P1.8 Proof by Induction P1.9 Vectors D1.1 Algorithms	Overarching theme 1: Mathematical argument, language and proof Overarching theme 2: Mathematical problem solving Overarching theme 3: Mathematical modelling	A Level Mathematics students must use mathematical notation and be able to recall the mathematical formulae and identities. Students are required to develop skills in working scientifically over the course of this qualification. OT1 Construct and present mathematical arguments through appropriate use of diagrams; sketching graphs; logical deduction; precise statements involving correct use of symbols and connecting language, including: constant, coefficient, expression, equation, function, identity, index, term, variable. OT2 Recognise the underlying mathematical structure in a situation and simplify an	3 exam style assessments based on taught chapters (1-2 hours each) P1.1 and P1.3 P1.2 and P1.4 P1.6 and P1.9	

			abstract concept appropriately to enable problems to be solved. OT3 Translate a situation in context into a mathematical model, making simplifying assumptions.		
Spring	P1.5 Volumes of Revolution P1.7 Linear Transformations D1.1 Algorithms D1.2 Graphs and networks D1.3 Algorithms on Graphs D1.4 Route Inspection D1.6 Linear Programming D1.8 Critical Path Analysis M1.1 Momentum and Impulse M1.2 Work, Energy and Power M1.4 Elastic Collisions in One Dimension	Overarching theme 1: Mathematical argument, language and proof Overarching theme 2: Mathematical problem solving Overarching theme 3: Mathematical modelling	or1 Understand and use mathematical language and syntax as set out in the content. Or1 Understand and use language and symbols associated with set theory, as set out in the content. Apply to solutions of inequalities and probability. Or2 Understand the concept of a mathematical problem-solving cycle, including specifying the problem, collecting information, processing and representing information and interpreting results, which may identify the need to repeat the cycle. Or2 Understand, interpret and extract information from	3 exam style assessments (1-2 hours each) Pure (without P1.5) Decision (without D1.8) Mechanics One 2 hour 'mock' style assessment on topics done	

			diagrams and construct mathematical diagrams to solve problems, including in mechanics. OT3 Use a mathematical model with suitable inputs to engage with and explore situations (for a given model or a model constructed or selected by the student). OT3 Interpret the outputs of a mathematical model in the context of the original situation (for a given model or a model constructed or selected by the student).		
Summer	P1.5 Volumes of Revolution D1.8 Critical Path Analysis Revision for AS external exams Start Year 13 topics: P2.1 Complex Numbers P2.2 Series P2.5 Polar Coordinates	Overarching theme 1: Mathematical argument, language and proof Overarching theme 2: Mathematical problem solving Overarching theme 3: Mathematical modelling	ort Comprehend and critique mathematical arguments, proofs and justifications of methods and formulae, including those relating to applications of mathematics. Ort Understand and use the definition of a function; domain and range of functions Ort Interpret and communicate solutions in the context of the original problem.	AS external exams (if needed for those not pursuing into year 13). Will consist of two pure, one decision and one mechanics exams. Mock exams (one pure, one decision and one mechanics)	

	OT3 Understand and use modelling assumptions. OT3 Understand that a mathematical model can be refined by considering its outputs and simplifying assumptions; evaluate whether
	the model is appropriate