

Y11: Subject Curriculum Outline

Year 11 Subjects	Term One	Term Two	Term Three	Term Four	Term Five	Term Six
Mathematics: (Higher)	Vectors & geometric proof - Understand and use vector notation, including column vectors, to represent displacement and direction - Perform vector operations: addition, subtraction, scalar multiplication, and find vector lengths using Pythagoras' Theorem - Represent vectors and combinations pictorially in the plane - Calculate resultants and solve geometric problems involving vectors, including dividing in a ratio - Use vectors for geometric proofs, including parallel lines and collinearity	Reciprocal & exponential graphs, gradient & area under curves - Recognise, sketch, and interpret graphs of reciprocal and exponential functions; state when they are undefined - Explore and solve growth and decay problems using exponential functions and calculators - Apply and describe transformations of functions (linear, quadratic, cubic) using algebraic notation - Estimate areas under curves using trapezia - Interpret and estimate gradients of linear and non-linear graphs, including in distance–time, velocity–time, financial, and real-life rate-of-change contexts	Direct & inverse proportion - Recognise and interpret graphs and tables showing direct and inverse proportion, including square and cubic relationships - Write and use equations for direct and inverse proportion (e.g. $y = kx$, $y \propto 1/x^2$) - Solve word problems involving proportionality by finding and using the constant k - Plot and read values from graphs to solve proportion problems	Revision & final exam preparation		
	Advanced algebra - Rationalise denominators with surds, simplify, multiply, and divide algebraic fractions - Solve equations involving algebraic fractions	Preparation for 1st PPE	Feedback from PPE			

**Mathematics:
(Foundational)**

Fractions, indices & standard form

- Add, subtract, multiply, and divide mixed numbers (including with whole numbers)
- Find reciprocals of integers, decimals, and fractions
- Understand a reciprocal as the multiplicative inverse ($\text{non-zero} \times \text{reciprocal} = 1$; zero has no reciprocal)
- Apply index laws, including powers of powers and zero power
- Simplify and calculate with integer powers and fractions
- Convert between standard form and ordinary numbers
- Add, subtract, multiply, and divide in standard form
- Use and interpret standard form on a calculator

Similarity & congruence

- Prove triangle congruence using SSS, SAS, ASA, and RHS
- Solve angle problems using congruence and similarity
- Identify and reason with similar shapes, including circles and regular polygons

Vectors

- Use vector and column notation
- Understand vector direction, magnitude, and scalar multiples
- Add, subtract, and scale vectors graphically and using column vectors
- Find vector lengths using Pythagoras' Theorem
- Calculate resultants and solve geometric problems involving vectors and simple ratios

Advanced algebra

- Distinguish between equations and identities; use $\neq$ symbol
- Change the subject of a formula involving squares and roots
- Use algebraic proofs with expressions
- Solve problems involving inverse proportion, including using and interpreting graphs
- Find equations of lines from two points; interpret gradients from $ax + by = c$
- Recognise and sketch cubic and reciprocal graphs

Feedback from PPEs, revision & final exam preparation

Fractions, indices & standard form

- Add, subtract, multiply, and divide mixed numbers (including with whole numbers)
- Find reciprocals of integers, decimals, and fractions
- Understand a reciprocal as the multiplicative inverse ($\text{non-zero} \times \text{reciprocal} = 1$; zero has no reciprocal)
- Apply index laws, including powers of powers and zero power
- Simplify and calculate with integer powers and fractions
- Convert between standard form and ordinary numbers
- Add, subtract, multiply, and divide in standard form
- Use and interpret standard form on a calculator

Similarity & congruence

- Prove triangle congruence using SSS, SAS, ASA, and RHS
- Solve angle problems using congruence and similarity
- Identify and reason with similar shapes, including circles and regular polygons
- Understand and apply similarity in 2D, including scale factors and their effects on perimeter, area, and volume
- Interpret scale diagrams, maps, and bearings as similar to real-life objects

Science: Double Award (See below for Triple Science Curriculum)	Rate and Extent of Chemical Reactions Core Knowledge: - Measuring reaction rates through changes in mass or volume; understanding how to interpret and calculate rates from graphs. - Describing how temperature, concentration, surface area, and catalysts influence the rate of a chemical reaction based on collision theory. - Understanding dynamic equilibrium, Le Châtelier's principle, and how changing conditions like temperature, concentration, and pressure affect the position of equilibrium. Forces and Balance and Motion Core Knowledge: - Understand scalar and vector quantities, the difference between contact and non-contact forces, and how to calculate resultant forces. Apply Newton's First Law to predict motion and Newton's Third Law to describe force pairs in interactions. Use free-body diagrams and centre of mass concepts to analyse objects in equilibrium.	Waves Core Knowledge: - Different types of waves: We'll explore "transverse waves" (like water ripples, moving up and down) and "longitudinal waves" (like sound, pushing back and forth). - How waves behave: You'll learn about important wave features like speed, frequency, and wavelength, and how to draw diagrams of waves. - About the electromagnetic spectrum: You'll discover that light, radio waves, X-rays, and more are all types of electromagnetic waves, which travel at a very high speed. - The uses and dangers of different waves: We'll explore how different electromagnetic waves are used (like microwaves for cooking or X-rays for imaging) and what their potential hazards are. Earth's Resources Core knowledge: - How we get clean drinking water: You'll discover how water from rivers and the sea is cleaned and made safe to drink using different methods – and What happens to dirty water. - How we get low grade ores to provide metals: You'll	Exam Preparation
---	--	--	--------------------------------

	- Describe motion using terms like velocity, acceleration, and terminal velocity. Understand how friction, air resistance, and balanced/unbalanced forces affect acceleration. - Explore stopping distances by combining thinking and braking distances, and understand factors affecting both. Use momentum equations to solve collision problems, applying the law of conservation of momentum. Consider how braking force and deceleration relate to safety. Inheritance, Variation and Evolution Core Knowledge - Understand the structure of DNA, the role of genes and chromosomes, how genetic information is inherited. Using Punnett squares and family trees to predict outcomes. - Explore the causes of variation (genetic, environmental, or both), natural selection, selective breeding, and genetic engineering.	find out about special ways to extract metals, even using plants or bacteria. - How to check a product's environmental impact: We'll learn how to follow a product's "life cycle" from start to finish to see how it affects the Earth. Electromagnetism Core Knowledge: - discover that magnets have North and South poles and how they attract or repel each other. - learn how to draw magnetic field lines around magnets and around wires carrying electricity. - explore the "motor effect," where a force is produced when a wire carrying current is placed in a magnetic field.	
--	---	--	--

English	Literary Heritage: A Christmas Carol Students will study 'A Christmas Carol' and be introduced to the idea of a didactic novella. They will study a range of themes and concepts connected to 'A Christmas Carol'. These include: generosity, greed, family, Christmas spirit, social responsibility, redemption, character development, setting/atmosphere and authorial intent. Revision of language will be interwoven throughout this unit. Language Paper 1 walkthroughs, model answers and timed practice will be provided.		Revision Students will revise all previously taught units. Teachers will follow a week-by-week overview to ensure all necessary elements of the Literature and Language GCSEs are revised.		
History	Elizabethan England: Conflict and Crisis Explore the later challenges of Elizabeth's reign including threats from home and abroad, and responses to poverty. Core knowledge (Edexcel Paper 2 – Elizabeth): - Catholic threats and plots against Elizabeth (e.g. Ridolfi, Throckmorton, Babington) - Execution of Mary Queen of Scots - Foreign policy and the Spanish Armada - Exploration and England's global ambitions - Causes of poverty and government responses	Civil Rights in the USA (1950–1960) Understand the background to the Civil Rights Movement and the early efforts to challenge segregation and racism in post-war America. Core knowledge (Edexcel Paper 3 – Civil Rights): - Segregation and Jim Crow laws - Brown v. Board of Education and Little Rock - The role of the NAACP - Montgomery Bus Boycott and Rosa Parks - Opposition to progress and White Citizens' Councils - Early federal involvement and limitations	Civil Rights in the USA (1960–1975) Explore the development of the Civil Rights Movement, its divisions, and the wider struggle for equality. Core knowledge (Edexcel Paper 3 – Civil Rights): - Martin Luther King and non-violent protest (e.g. Birmingham, Selma, March on Washington) - Civil Rights Act (1964) and Voting Rights Act (1965) - Malcolm X and rise of Black Power - Race riots and urban unrest - Successes and remaining limitations by 1975	The Vietnam War Study US involvement in Vietnam, including causes, tactics, opposition, and eventual withdrawal. Core knowledge (Edexcel Paper 3 – Vietnam): - Origins: containment, domino theory, and the Gulf of Tonkin - Increasing US involvement under Kennedy and Johnson - Guerrilla warfare, the Vietcong, and US military tactics - Impact of the media and My Lai Massacre - Growing anti-war movement in the USA - Nixon, Vietnamisation, and US withdrawal - Consequences of the war for the USA and Vietnam	Revision and Exam Technique Focus on refining exam technique, consolidating content knowledge, and boosting student confidence across all papers. Core knowledge and support: - Practising all question types across Papers 1, 2, and 3 - Recap of key themes and knowledge across topics - Structured revision lessons including retrieval practice and exam practice Exam school sessions during exam season

Geography	Urban issues and Challenges Part 1 Understand the causes and consequences of urbanisation, the challenges faced by rapidly growing cities, and the strategies used to manage urban growth sustainably. Core knowledge: - Urbanisation and global patterns - Challenges of urban growth Fieldwork preparation Enable students to collect, analyse, and interpret primary data in real-world environments (human and physical), helping them develop practical geographical skills and a deeper understanding of geographical concepts. Core knowledge: - Planning - Data collection	Fieldwork write up Enable students to collect, analyse, and interpret primary data in real-world environments (human and physical), helping them develop practical geographical skills and a deeper understanding of geographical concepts. Core knowledge: - Data presentation - Data analysis - Exam practice Urban issues and Challenges Part 2 Understand the causes and consequences of urbanisation, the challenges faced by rapidly growing cities, and the strategies used to manage urban growth sustainably. Core knowledge: - Urban sustainability Strategies to manage urban growth	The changing economic world Part 1 Understand the causes and consequences of economic development and disparity, and to explore the processes of development, including globalisation and the role of different economies. Core knowledge: - Development Indicators - Causes of economic inequalities - Strategies to reduce the development gap - The role of TNCs	The changing economic world Part 2 Understand the causes and consequences of economic development and disparity, and to explore the processes of development, including globalisation and the role of different economies. Core knowledge: - Changing industry in the UK	AIB study Applying geographical knowledge, critically analyse resources, and make informed decisions about real-world issues from social, economic, and environmental perspectives. Core knowledge: - Issue evaluation - Analysing and interpreting resources Decision making
	Ethics and Philosophy Christian Practices ● Understanding how Christians put their faith into action in the UK and worldwide Core Knowledge ● Different forms of worship ● Prayer ● Sacraments ● Pilgrimage	Religion and Life ● Understanding how both Christians and Buddhists believe life on Earth began. Their attitudes towards value of human and animal life and death Core Knowledge ● Religious and scientific views on how life began on the planet.	Buddhist Practices ● Understanding of how Buddhists worship and the ethical code by which they live Core Knowledge ● Meditation ● Worship ● Death ceremonies ● Festivals ● The five moral precepts The six perfections	Revision	

	• Role of Church in the community	• Use of the planet and resources • Use and abuse of animals • Abortion - Euthanasia				
Languages	Healthy Living and Lifestyle • Talking about diet and healthy and unhealthy habits. Core Knowledge • Phonics and Reading Aloud practice. • Talking about health problems and addictions. • Revising radical changing verbs to say if are you fit or not. • Talking about what you eat/drink and why. • Saying what you are going to do to be healthier. • Saying what you have done recently to be healthy. • Answering key topic questions for speaking and writing.	Customs, Festivals and Celebrations • Talking about family and cultural celebrations. Core Knowledge • Phonics and Reading Aloud practice. • Talking about personal special days and family traditions. • Revising all 3 tenses with family celebrations. • Celebrations in the French/Spanish speaking world. • Using the past tense to describe a recent celebration. • Using the imperfect tense to say how you celebrated when you were younger. • Answering key topic questions for speaking and writing.	The world of work • Talking about jobs and career plans. Core Knowledge • Phonics and Reading Aloud practice. • Learning types of jobs and reviewing adjective agreements. • Using infinitive structures to talk about jobs we want or not. • Understanding people's work experiences. • Giving advice about looking for a job. • Talking about your idea job using the future and conditional tenses. • Answering key topic questions for speaking and writing.	Celebrity Culture Talking about famous people and their impact on our lives. Core Knowledge • Phonics and Reading Aloud practice. • Talking about our favourite celebrities. • Comparing past celebrities with current ones. • Learning about celebrities from the French/Spanish speaking world. • Talking about celebrities being role models. • Comparing the positives and negatives of being famous. • Saying what you would do if you were famous. • Answering key topic questions for speaking and writing.	Exam skills and Revision • Speaking exam practice – review of role-play, read aloud and photocard skills. • Review of key questions per topic and theme for speaking and writing. • Reviewing key listening skills and topic vocabulary. • Reviewing key reading skills and topic vocabulary. • Reviewing key writing skills. • Reviewing key translations skills.	Exam skills and Revision • Reviewing key listening skills and topic vocabulary. • Reviewing key reading skills and topic vocabulary. • Reviewing key writing skills. • Reviewing key translations skills.

BTEC Sport: (Core PE see below)	Component 2 Learning Outcome B Be able to participate in sport and understand the roles and responsibilities of officials Core Knowledge - Techniques, strategies and fitness required for different sports - Officials in sport - Rules and regulations in sports	Component 2 Learning Outcome C Component 2 PSA Demonstrate ways to improve participants' sporting techniques. Core Knowledge - Planning drills and conditioned practices to develop participants' sporting skills - Drills to improve sporting performance	Component 3 Explore the importance of fitness for sports performance Investigate fitness testing to determine fitness levels Core Knowledge - The importance of fitness for successful participation in sport - Fitness training principles - Exercise intensity and how it can be determined	Component 3 Investigate different fitness training methods Core Knowledge - Importance of fitness testing and requirements for administration of each fitness test - Fitness test methods for components of physical fitness - Fitness test methods for components of skill-related fitness - Interpretation of fitness test results	Component 3 External exam May Investigate fitness programming to improve fitness and sports performance Core Knowledge - Requirements for fitness training methods - Fitness training methods - Additional requirements for each of the fitness training methods - Provision for taking part in fitness training methods - The effects of long-term fitness training on the body systems - Personal information to aid fitness training programme design - Fitness programme design - Motivational techniques for fitness programming	
	Theme: Project 2 - Individual students projects based on a theme, chosen from a previous examination paper and started in Year 10. The focus this term is to develop their ideas further and explore a different media or combination of media e.g. lino printing or etching. Mixed media etc. They will also consider further imagery to draw from and different artists. Artist Link: Each pupil begins from a unique starting point, having selected an individual artist and completed an analysis	Theme: Project 2, - Continuation of individual themes. Focus on developing final ideas. Final idea will be started in PPE exam and completed in following lessons. Sketchbook presentation finalised. Deadline for this project is Christmas. Artist Link: At this stage, pupils may use previously chosen artists as influences and add new ones if necessary. Core Knowledge: Work should further develop and refine ideas toward a conclusion, using thumbnail sketches to explore final	Theme: Project 3 - Externally Set Assignment. Individual theme chosen from the exam paper. Paper arrives at the start of January. Students will pick a theme and select a starting point to explore through drawing, media exploration and artist analysis. Artist Link: These artists will be tailored to each student, depending on their chosen starting point. A minimum of two artists must be researched and analysed, with clear connections demonstrated through the student's experimental work and supporting annotations.	Theme: Project 3 - Continuation of individual project. Focus this term is on the development of ideas, applying what is learnt from artist analysis and media and technique exploration. Artist Link: Artists will be selected on an ongoing basis as required, personalised to each student to facilitate the refinement of their ideas. Core Knowledge: Work should progressively develop and	Theme: Project 3 - Continuation. Focus on development of final piece and preparation for the creation of the final piece in 10 hour exam. Artist Link: The influence of selected artists should be evident in the students' experimental and written work throughout the project including selected aspects into the final piece. Core Knowledge: Work should be cohesive and show final developments, refined ideas, composition consideration, expert	Exam Leave - Art Course finished.

	and pastiche of their work as summer homework. Core Knowledge: Exploration and refinement of media and techniques. Reflect on their intentions and the influence of chosen artists to develop their ideas. Artist analysis. Media and techniques; All media including etching equipment.	compositions. Emphasis on expert drawing, media technique refinement, time management and planning and making of final piece. Media and techniques; All media available.	Core Knowledge: Observational drawing from life or relevant imagery linked to the chosen theme, focusing on proportion, visual elements and appropriate mark-making. Analysis of artists or cultural artwork and applying learning to the students own development of ideas. Media and techniques; All media available.	refine ideas toward a conclusion through a continuous process of observational drawing, artist analysis, and media exploration. Creating a cohesive and purposeful body of work. Development of final idea. Media and techniques; All media available.	drawing and refined media techniques. Effective time management and planning in preparation for the final exam. Media and techniques; All media Available.	
Dance	Component 2 - Developing skills and techniques in the performing arts Students study a piece of professional repertoire, assess their own dance skills and set themselves targets for improvement. At the end of the process they write an evaluation Core knowledge • Technical and expressive dance skills • Skills audit • Characteristics of style/genre • Professional behaviours • Preparing for performance • Developing and applying skills • Communication of meaning, intentions and links to a theme • Target setting for improvement	Component 3 - Responding to a brief Learners collaborate in groups to create and perform a workshop piece in response to a given brief and stimulus. This process involves applying their knowledge and skills in dance to develop a performance that meets the brief's requirements. The assessment emphasizes creativity, teamwork, and the ability to interpret and respond to stimuli within a performance context. Core knowledge • Choreography • Performance • Analysis of professional works/choreographers • Selecting and developing skills in response to a brief • Applying skills and techniques in a workshop performance Evaluating the development process and outcome in response to a brief	Revision			
Drama	Single lessons: Component 3 - Text in Performance - performance of 2 extracts from a published play as either a designer or performer. Core Knowledge: • Work collaboratively to generate, develop and communicate ideas	Part 1: Final Rehearsals and Performance of Component 3 - Text in Performance - End of January/Early February External Exam Core Knowledge: • Work collaboratively to generate, develop and communicate ideas • Develop a range of theatrical skills and apply them to create performance as a performer or designer	Revision: Part 1: Revision of Set Text - Around the World in 80 Days by Jules Verne and Multiple choice questions on Professional roles in theatre and theatre spaces. Core Knowledge: • Explore performance texts, understanding their social, cultural and historical context including the theatrical conventions of the period in which they were created • Apply practical ideas in a written context			

	● Develop a range of theatrical skills and apply them to create performance as a performer or designer ● Ability to set aims and intentions Double lessons: Revision of Set Text - Around the World in 80 Days by Jules Verne Core Knowledge: ● Explore performance texts, understanding their social, cultural and historical context including the theatrical conventions of the period in which they were created ● Apply practical ideas in a written context	● Ability to set aims and intentions Part 2: Revision of: Theatre Review - analysis of live theatre preparation for written exam. Core Knowledge: ● Knowledge of Drama and Theatre ● Analysis and evaluation of the work of live theatre makers	Part 2: Revision of: Theatre Review - analysis of live theatre preparation for written exam. Core Knowledge: ● Knowledge of Drama and theatre ● Analysis and Evaluation of the work of live theatre makers ● Develop an awareness and understanding of the roles and processes undertaken in contemporary professional theatre practice
Music	<u>Double Lessons</u> Exam Brief Composition Complete exam brief composition Core Knowledge Draw on compositional techniques used in AoS 1-4. Can organise and develop ideas showing creativity and sophistication. Demonstrate solid use and understanding of the elements of music. <u>Single Lessons</u> AoS 1 and 4 : Revision Revisit AoS1 : Musical form and Structure. Developing an understanding of extended structure techniques and associated terminology. Explore Aos 4 - Fusions/Bhangra - Electronic music, use of technology and strophic structures Core Knowledge: Reinforce understanding of Baroque, Classical and Romantic period musical features.	Aos 3,4 & 2 Revision Revisit Fusions (AoS3) leitmotif and thematic transformation (AoS4) Textural developments (AoS3) Core Knowledge Develop exam technique. Extended answers (Film music) and hints and tips for answering set work and general listening questions. Coursework Mop-Up completion of all coursework tasks. Core Knowledge: Understand marking criteria for performance and composition to maximise coursework outcomes. Coursework / Examination Exam Brief composition completed. Performance 2 completed. Further develop exam technique. Completion of Scores and Logs.	Examination preparation Revision activities based on the 4 AoS, including the set works 'Badinerie' and 'Africa'. Core Knowledge Understand key contextual knowledge of all 4 AoS. Can identify the use of the elements of music in known and unknown pieces, and describe what is happening using specific musical vocabulary. Can accurately complete melodic and rhythmic dictation exercises. Can recognise cadences and intervals. Develop examination technique.

Film	<u>Term 1 & 2 - Rebel Without a Cause & Ferris Bueller's Day Off</u> The last year of study begins with two memorable and relatable films that students have historically enjoyed. The exam will ask about each film separately, before bringing them together, encouraging students to compare how the same themes are treated differently across eras. <u>Key Knowledge:</u> • Genre • Narrative Context					<u>Term 3 - Ladybird & Specialist Writing</u> The final study film is assessed differently to all of the previous set texts, with students expected to respond to a piece of specialist writing that they have studied in lesson time. There is a choice of specialist writing texts, with one specific to each film, and one generic piece that refers to independent films generally. Key knowledge: • Critical & evaluative writing • Adaptation of ideas					<u>Term 4 - Coursework, film history & revision</u> We begin our preparation for both the final exams, and the submission of the NEA element of the course. We also cover our final unit, Film History. <u>Key knowledge:</u> • Revision skills • Film History Screenwriting & evaluative skills					<u>Term 5 - Revision</u> The aim of the final term is to ensure students are prepared for their exam. This refers to both knowing the content of the course and ensuring that their exam technique is polished and perfected before the start of the formal exam season. <u>Key knowledge:</u> Revision skills					Term 6: N/A				
	<u>Key topics</u> Theory content: • networks • robust software Advanced programming skills Core knowledge: • Network & different types of networks (LAN, WAN) • Internet structured(IP addressing, routers) • Characteristics of wired and wireless connectivity • Network speeds and constructing expressions involving file size, transmission rate and time • Network protocols (Ethernet, Wi-Fi, TCP/IP, HTTP, HTTPS, FTP) and email					<u>Key topics</u> Theory content: • data representation: • images • sound Advanced programming skills Core knowledge: • understand how computers encode characters using 7-bit ASCII • Binary representation of analogue sound and bitmap images. • Limitations of binary representation of data when constrained by the number of available bits					<u>Key topics</u> Theory content: • network security Advanced programming skills Core knowledge: • The importance of network security, ways of identifying network vulnerabilities (penetration testing, ethical hacking) and methods of protecting networks (access control, physical security, firewalls)					<u>Key topics</u> Issues and impact: • ethical questions • law • online safety Advanced programming skills Core knowledge: • Environmental issues associated with the use of digital devices • Ethical and legal issues associated with the collection and use of personal data • Ethical and legal issues associated with the use of artificial intelligence					<u>Key topics</u> Exam preparation - key skills (paper 1) Exam preparation - practical programming (paper 2)				

Computer Science

	protocols (POP3, SMTP, IMAP) • How the 4-layer (application, transport, internet, link) TCP/IP model handles data transmission over a network • Characteristics of network topologies (bus, star, mesh)			• Methods of intellectual property protection for computer systems and software • Threats to digital systems posed by malware • methods of protecting digital systems and data	
--	--	--	--	--	--

Science Triple Award Curriculum

Science Discipline	Term One	Term Two	Term Three - Six
Physics	Waves Core Knowledge: • Different types of waves: We'll explore "transverse waves" (like water ripples, moving up and down) and "longitudinal waves" (like sound, pushing back and forth). • How waves behave: You'll learn about important wave features like speed, frequency, and wavelength, and how to draw diagrams of waves. • About the electromagnetic spectrum: You'll discover that light, radio waves, X-rays, and more are all types of electromagnetic waves, which travel at a very high speed.	Electromagnetism Core Knowledge: • discover that magnets have North and South poles and how they attract or repel each other. • learn how to draw magnetic field lines around magnets and around wires carrying electricity. • explore the "motor effect," where a force is produced when a wire carrying current is placed in a magnetic field. • Learn that generators use the generator effect—where movement through a magnetic field induces a current—to produce electricity. This principle is applied in alternators (AC) and dynamos (DC). Space Core Knowledge:	Revision

	- The uses and dangers of different waves: We'll explore how different electromagnetic waves are used (like microwaves for cooking or X-rays for imaging) and what their potential hazards are. Light Core Knowledge: - understand that visible light is a small part of the electromagnetic spectrum and how different objects reflect or absorb light to show colors. - explore reflection (light bouncing off surfaces) and refraction (light bending when it goes from one material to another). - learn about concave and convex lenses and how they form images, which is key to understanding eyeglasses and cameras.	- discover that our solar system is made up of the Sun, planets, and other celestial bodies, and how gravity holds them together. - explore the life cycle of stars, from their formation in nebulae to their eventual death as white dwarfs or supernovae. - learn about "red-shift," which tells us that other galaxies are moving away from us, suggesting the universe is constantly expanding.	
Biology	Inheritance, Variation and Evolution Core Knowledge - Understand the structure of DNA, the role of genes and chromosomes, how genetic information is inherited. Using Punnett squares and family trees to predict outcomes. - Explore the causes of variation (genetic, environmental, or both), natural selection, selective breeding, and genetic engineering. - Learn about fossils, the process of fossil formation and extinction.	Ecology Core Knowledge - Understand how organisms adapt to their environments and compete for limited resources. Learn about interdependence within ecosystems, including food chains/webs, abiotic and biotic factors, and the importance of stable communities. - Study the importance of biodiversity and how human activities like deforestation, pollution, and global warming affect ecosystems. - Examine the cycling of materials through the carbon and water cycles, the structure and function of decomposers, and the efficiency of biomass transfer. Learn how food production is influenced.	Revision

	Rate and Extent of Chemical Reactions	Earth's Atmosphere	Using Resources	Terms 4 – 6
Chemistry	Core Knowledge: - Measuring reaction rates through changes in mass or volume; understanding how to interpret and calculate rates from graphs. - Describing how temperature, concentration, surface area, and catalysts influence the rate of a chemical reaction based on collision theory. Understanding dynamic equilibrium, Le Châtelier's principle, and how changing conditions like temperature, concentration, and pressure affect the position of equilibrium.	Core Knowledge - How our early Earth's air was different: It had lots of carbon dioxide and not much oxygen, unlike today. - Why the air changed: Over time, carbon dioxide decreased because oceans soaked it up and plants used it to grow. - How humans are changing the air now: Burning fuels and cutting down trees release gases that warm the planet and cause climate change, leading to things like rising sea levels. Earth's Resources Core knowledge: - How we get clean drinking water: You'll discover how water from rivers and the sea is cleaned and made safe to drink using different methods – and What happens to dirty water. - How we get low grade ores to provide metals: You'll find out about special ways to extract metals, even using plants or bacteria. - How to check a product's environmental impact: We'll learn how to follow a product's "life cycle" from start to finish to see how it affects the Earth.	Core Knowledge - About using metals: We'll understand what causes metals to corrode and how we can protect them, and how combining different metals (called alloys) creates new materials with improved properties, like stronger steel. - What plastics are and how they're made: We'll explore different types of plastics and how they behave, like those that can be reshaped when heated and those that can't. - How we make ammonia for fertilizers: You'll understand the special process (Haber process) that creates ammonia, which is important for growing crops. - How fertilizers help plants grow: We'll learn about the ingredients in fertilizers (NPK) and how they boost plant growth.	Revision

Year 11: Design Technology Curriculum

NB: Students select their chosen specialism at the end of Y8 and will study these for the entire year

	3DD – Component 1: Portfolio (60%)	3DD – Component 1: Portfolio	3DD – Component 2: ESA	3DD – Component 2: ESA	3DD – Component 2: ESA	<u>Exam Preparation</u>
Timbers	- Advanced design development using the results of their mock examination to guide further creative alterations Core Knowledge - Development Modelling - Development Testing - Development Experimentation - Card / Foam / Timber mock-ups	- Preparation for Nov / Dec PPE - Planning manufacture – cutting list, production plan, technical drawings 10 Hr mock examination (PPE) to start manufacture of their final practical element Core Knowledge Range of techniques needed for manufacture of their final practical piece	- Introduction to Component 2: ESA (40%) - Choosing Component 2 theme - Initial research into the theme and linked artists or designers - Initial design ideas - Detailed design development - Card / foam 3D prototyping Core Knowledge - Analysis of Task - Moodboard - Designer / Artist / Culture Inspiration page - Existing product analysis - Initial design sketches - Isometric / 2pt perspective detailed designs 3D solid modelling	- Experimentation with Materials, Techniques and Processes - Planning for ESA 10Hr examination - Cutting list, Production plan, Technical drawings - Preparing formers, laser etching or laser cut components Core Knowledge Range of techniques used for experimentation of timbers products to improve both functional or aesthetic properties.	- ESA examination – 40% - Manufacture of final 3D outcome for the ESA theme chosen in January Core Knowledge Range of techniques needed for manufacture of their final practical piece	
Graphic Design	Non Exam Assessment: - Annotate design ideas - Review of initial ideas - Development plan Developing techniques for manufacture	Non Exam Assessment: - Manufacturing specification - Working drawing - Review of final design Begin manufacture	Non Exam Assessment: - Manufacture - Manufacture diary Testing and evaluating	Theory: PPE Revision Core revision	Theory: Specialist Paper & Board revision Core revision	Exam Preparation

Textiles	Non Exam Assessment:	Non Exam Assessment:	Non Exam Assessment:	Theory:	Theory:	Exam Preparation
	- Annotate design ideas - Review of initial ideas - Development plan - Developing techniques for manufacture	- Manufacturing specification - Working drawing - Review of final design - Begin manufacture	- Manufacture - Manufacture diary - Testing and evaluating	- PPE Revision - Core revision	- Specialist Textiles revision - Core revision	
Food and Nutrition	NEA 1	NEA 2	NEA 2	NEA 2	Exam revision	Exam revision
	Food investigation (30 marks)	Food preparation assessment (70 marks) Knowledge, skills and understanding in relation to the planning, preparation, cooking, presentation of food and application of nutrition related to the chosen task.	Food preparation assessment (70 marks) Students will prepare, cook and present a final menu of three dishes within a single period of no more than three hours, planning in advance how this will be achieved.	Food preparation assessment (70 marks)	1. Food, nutrition and health 2. Food science 3. Food safety 4. Food choice 5. Food provenance	- Written exam: 1 hour 45 minutes 100 marks • 50% of GCSE Questions - Multiple choice questions (20 marks) - Five questions each with a number of sub questions (80 marks) 1. Food, nutrition and health 2. Food science 3. Food safety 4. Food choice 5. Food provenance

Core PE Curriculum: Y10 and Y11

Year 10/11 Subjects	Highly Competitive Group	Competitive Group	Active Skills and Games Group	Fitness for Life Group	Recreational Movement Group
Core PE	Core Knowledge Performance Excellence Execute advanced sport-specific skills with precision, consistency, and under pressure in competitive scenarios. Elite Tactical Understanding Apply complex strategies and adapt game plans in response to opponents. Physical Conditioning and Preparation Understand and implement structured training methods Leadership, Analysis, and Communication Lead warm-ups, team discussions, and give tactical feedback Professional Standards and Mindset Show resilience, discipline, and commitment to high performance; set ambitious goals and take responsibility for continuous improvement.	Core Knowledge High-Level Skill Application Perform advanced technical skills with accuracy, control, and decision-making under game pressure across multiple sports. Tactical Awareness and Game Intelligence Apply and adapt in-depth tactical strategies (e.g. formations, set plays, transitional play) based on game context and opponent behaviour. Physical Fitness and Conditioning Understand and apply components of fitness relevant to performance (e.g. agility, strength, aerobic capacity); engage in sport-specific conditioning. Leadership and Team Roles Take on leadership roles such as captain, coach, or official; organise and influence team structure, motivation, and performance. Evaluation and Performance Analysis Use feedback, video analysis, and performance data to assess strengths and weaknesses; set and work towards SMART performance goals.	Core Knowledge Lifelong Physical Activity Understand the importance of regular physical activity for physical, mental, and social health beyond school. Enjoyment Through Variety Engage in a range of accessible and enjoyable activities (e.g. fitness classes, walking, social sports, yoga, dance) to discover personal interests. Basic Fitness and Wellbeing Principles Learn how to maintain fitness through accessible exercise (e.g. FITT principle, heart rate zones, stretching techniques). Safe Participation and Self-Management Follow safety guidelines, warm-up and cool down independently, and manage personal effort and activity level responsibly. Personal Goal Setting and Motivation Set realistic, personal fitness or wellbeing goals; reflect on progress to stay motivated and active in daily life.	Core Knowledge Health and Wellbeing Awareness Understand how regular physical activity supports physical, mental, and emotional health across life stages. Enjoyment and Participation Engage positively in a variety of inclusive, low-pressure activities (e.g. walking, fitness circuits, recreational games, dance). Basic Fitness Understanding Learn simple fitness concepts (e.g. warming up, stretching, hydration, aerobic vs anaerobic activity) for safe participation. Confidence and Independence Develop confidence to take part in physical activity independently outside of school (e.g. gym sessions, park runs, home workouts). Personal Responsibility and Goal Setting Set achievable activity goals based on individual needs and preferences; reflect on progress and make healthy lifestyle choices.	Core Knowledge Lifelong Physical Activity Understand how recreational activity supports long-term health, wellbeing, and quality of life. Participation Over Performance Value enjoyment, social interaction, and personal effort rather than competition or elite skill. Variety and Inclusivity Take part in a broad range of accessible and enjoyable activities (e.g. team games, walking, yoga, fitness classes, net games). Health and Safety Awareness Know how to warm up, cool down, and participate safely and responsibly in all forms of physical activity. Personal Motivation and Routine Develop confidence, set personal goals, and build habits that encourage continued activity beyond school.